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ORIGINAL ARTICLES.

ELEMENTS OF PROGNOSIS IN BRIGHT'S DISEASE.[1]

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In the popular mind, the name Bright's disease, at the present time, has a prophetic import not unlike that of a verdict of conviction after a trial for life. It is regarded as a hopelessly fatal malady; more hopeless indeed than the condition of one condemned to execution, inasmuch as in the latter case there may be the prospect of a new trial or a hope for pardon. This prevailing impression, like other popular impressions relating to disease, reflects the views of the medical profession. By the latter, Bright's disease, in its chronic form, is generally regarded as a disease from which recovery is not to be expected, a fatal termination taking place invariably sooner or later. This view of the prognosis is not far from the truth. It may be said, perhaps, to be a view which accords with our present pathological knowledge and clinical experience. But the scope of prognosis is not limited to recovery from a disease. A disease may involve more or less irremediable damage of important organs, but after having advanced to a certain extent the damage may not become greater, and the portions of the organs which remain unaffected may be sufficient for all the purposes of life and a fair state of health. Or, again, a disease may be progressive, but the progress may be so slow as not to interfere with a long duration of life and a certain degree of health. A chronic disease may persist, and remaining stationary, life is not endangered by the disease *per se*, but danger may be dependent on associated affections which may, or may not, have a pathological connection with the antecedent disease. Or, still again, a chronic disease may be well tolerated indefinitely provided other conditions pertaining to health are favorable, but proving fatal if other conditions, which we may call accessory, be unfavorable. These are considerations embraced properly within the scope of prognosis, using this term in its comprehensive sense. In this paper I propose to offer some remarks on the elements of prognosis in Bright's disease, taking into view not alone the intrinsic tendency of the disease, but the considerations just referred to. To be able to foresee the progress and issue of diseases in individual cases, is something more than an interesting professional accomplishment. It is of importance as regards the regulation of the private affairs of patients and their friends. Of still greater importance is the bearing, often, of prognosis on the treatment of diseases. I shall have occasion to refer to some points pertaining to the last named aspect of the subject of this paper.

The prognosis in Bright's disease has relation to the form or variety of the disease. Is the disease acute or chronic? This question is not always readily answered at the bedside; but I do not propose in this paper to enter into the subject of diagnosis. Assuming the existence of acute Bright's disease, experience teaches that, exclusive of important concomitant affections, the disease does not end fatally as a rule, and, moreover, as a rule it does not eventuate in any renal lesion, in other words, the acute is not followed by a chronic form of the disease. Exceptionally the acute disease proves fatal, or it continues in a chronic form. The points bearing on the prognosis in individual cases, are essentially the same in the acute and the chronic forms. These will be referred to in connection with chronic Bright's disease. There are cases of Bright's disease in which the disease cannot with propriety be said to be acute, inasmuch as there are new symptoms denoting acuteness of inflammation, but in other respects corresponding to the acute form. The disease in these cases is of temporary duration, and ends in recovery, no evidence of renal lesion remaining. These are cases which, as it seems to me, have not received sufficient attention by medical writers.

The several designations of acute Bright's disease, namely, acute diffuse nephritis, acute tubal nephritis, acute desquamative nephritis, etc., may be applied to these cases by substituting for the word acute, subacute as distinguished from chronic. The clinical history is the same as in the acute disease, except that the symptoms denote a sub-acute inflammation, and, anatomically, the disease in these cases differs from the severe forms of chronic Bright's disease in the fact that there is no persistent renal lesion.

In a certain proportion of the cases in which acute Bright's disease is said to accompany or follow scarlet fever and other infectious diseases, the inflammation is sub-acute. Occurring in other pathological connections, or when it is a primary affection, if unattended by œdema of the face or limbs, it is likely to be overlooked by those who do not observe the rule

[1] Read before the New York County Medical Association, November 16th, 1885.

to examine the urine in all cases, whether or not the symptoms point to renal disease. If ascertained, the problem in diagnosis and prognosis is to determine whether the affection be a sub-acute diffuse, or tubular or desquamative nephritis, or whether it be a chronic form of Bright's disease? This problem is not at once easily solved. It can only be definitively solved by the disappearance of all the evidences of renal disease after some weeks, and the recovery of health.

A diffuse tubular or desquamative nephritis, either acute or sub-acute, not infrequently occurs as an intercurrent event in connection with chronic Bright's disease. The latter affection, prior to the occurrence of the intercurrent nephritis, may have been latent, as regards symptoms other than those pertaining to the urine, and it may again become latent after recovery from the intercurrent inflammation. Here is a problem which cannot at once be definitely solved, namely, whether the existing symptoms such as coma and convulsions, dropsy, etc., are, to a greater or less extent, referable to the progress of these chronic affections, or whether they denote an intercurrent acute or sub-acute inflammation. The bearing of this problem on the prognosis is obvious. The occurrence of an intercurrent nephritis in certain cases explains the development of grave symptoms from which recovery takes place, leaving the patient in the state of health which previously existed.

A practical point, relating to prognosis after recovery from either acute or sub-acute diffuse nephritis, is the existence of a susceptibility of the uriniferous tubes to causes of inflammation. This susceptibility remains after recovery, rendering the patient liable to recurrences of the affection. This holds true whether the nephritis be a primary renal affection, or whether it be developed in connection with chronic Bright's disease.

I proceed to notice some of the elements of prognosis in cases of chronic Bright's disease. The latency in certain cases of Bright's disease for a long period, as regards any important symptoms exclusive of evidences afforded by examinations of the urine, is a most important clinical fact. What are the conditions requisite for latency? *First*, the kidneys must not be damaged beyond a certain extent. Nature has been bountiful in these as in other organs. Inasmuch as it has been demonstrated that one kidney may suffice for the adequate performance of the renal functions, it follows that a lesion may have impaired the functional power of the organs at least one half, without necessarily giving rise to important symptoms of disease. *Second*, the important organs of the body other than the kidneys must be capable of performing satisfactorily their respective functions. The functions of the digestive, the circulatory, the respiratory and the nervous system must be fairly maintained. *Third*, the laws of health, relating to alimentation, exercise, exposure to cold, mental excitement, and habits of life, must be observed. Now suppose, these, as we will call them, accessory conditions to be fulfilled, and a lesion of the kidneys to exist which diminishes their functional ability one-half, and the disease not to be progressive, life and health are compatible with the existence of chronic Bright's disease for an indefinite period. Mark the practical conclusions to which this view of the prognosis leads. In order that a chronic Bright's disease shall be well tolerated, provided the lesion has not reduced the ability of the kidneys to perform adequately their functions, the objects of treatment relate to the accessory conditions required for toleration —to wit, the conditions relating to other organs of the body, and to hygiene. We may assume the necessity for these conditions, inasmuch as the utmost limit of the functional capacity of the kidneys being constantly required, any disturbances elsewhere in the economy will be likely to involve overtasking of these organs. The situation may be compared to that of pulmonary emphysema leaving no reserved capacity of the lungs. Respiration is adequately performed if there be no unusual demand upon this function; but the pulmonary organs cannot meet any extra demand without more or less distress.

A patient comes to a physician complaining of some one of the minor manifestations of uræmia, such as headache, nausea in the morning, misty vision, or of a little œdema of the face and limbs, either with or without uræmic symptoms; or it may be that he complains only of impaired appetite and general debility. An examination of the urine shows the existence of chronic Bright's disease. Now chronic Bright's disease has probably existed in this case for months and perhaps for years. During this period the damage to the kidneys has not been sufficient to render the organs incapable of performing their functions adequately. They who are in the habit of examining the urine in all cases which come under their observation, not infrequently find the evidence of chronic Bright's disease when no symptoms pointed thereto. It may be many months or many years in these cases before the manifestations of the disease appear. I could cite cases illustrative of the latter statement. At length, the progress of the renal affection, or unfavorable accessory conditions, render the kidneys incapable of performing their functions adequately, and then appear symptoms which point to an affection of these organs. Hypertrophy of the heart without valvular lesions, and irrespective of pulmonary disease, is generally a result of a renal affection which must have existed for a considerable period. Now it is not uncommon to find cardiac hypertrophy when there has been nothing to create suspicion of an affection of the kidneys. Again, a person is seized with apoplectic coma and convulsions when apparently in good health. An examination of the urine shows Bright's disease which must have existed for a greater or less period. Instances of this kind have come under my observation.

These facts teach that so long as the kidneys are not damaged sufficiently to render them incompetent to perform their functions adequately, and so long as the accessory conditions which have been referred to are favorable, Bright's disease is well tolerated; that is, the disease is latent as regards any appreciable manifestations irrespective of an examination of the urine. The facts teach, moreover, that if the existence of the disease be known, the objects of treat-

ment are to prevent, if possible, further increase of the renal damage, and to make all the accessory conditions as favorable as possible. The prognosis is favorable in just so far as these objects of treatment are attainable. With reference to these objects the desirability of as early a diagnosis as possible is obvious.

The question now arises, how is the adequacy of the functions of the renal organs to be ascertained, irrespective of any obvious symptoms which are suggestive of inadequacy? The answer to this question, of course, relates to examinations of the urine. Is it an injustice to medical practitioners to say that examinations of the urine often have regard only to the inquiry as to the existence of Bright's disease, and to the form of the disease which exists, overlooking the importance of ascertaining the sufficiency of excrementitious elimination? The latter is the important object of the examinations with reference to prognosis. Are not examinations often limited to specimens consisting of a few ounces of urine, the quantity passed in a given time being imperfectly known, and, perhaps, not made an object of inquiry? The amount of albumen excreted and the number and variety of tube-casts are important with reference to the existence and the form of Bright's disease, but it is generally of much more importance to obtain information respecting the adequacy of the renal functions. I have frequently been struck with the fact that in examinations of the urine the specific gravity has not been taken into account. Albumen and casts in the urine show that the kidneys are doing what healthy organs ought not to do; but the more important inquiry is, are they doing what healthy organs ought to do? The kidneys may eliminate in abundance excrementitious products although albumen and casts are present abundantly in the urine, and, *per contra*, the elimination of these products may be more or less inadequate, although the urine may contain little or no albumen, and casts are wanting.

Inattention to the adequacy of the renal functions must be attributable to a lack of appreciation of the importance of this point of inquiry, inasmuch as information respecting this point is readily obtained. It suffices generally to ascertain the amount of urine passed in twenty-four hours, and to employ the urinometer. The quantity and the specific gravity are data for a rough estimate of the excrementitious products, but, practically, the estimate is near enough to accuracy. It is certainly not too strong an assertion that to be satisfied with the information that the quantity of urine is normal, without knowledge of its density, in cases of Bright's disease, is a culpable neglect. An apology may seem to be required for saying that the quantity of urine may be much increased, but with a specific gravity so low as to involve great danger from uræmic toxæmia; yet I can recall a case in which, under such circumstances, a practitioner had assiduously striven to lessen the amount of urinary secretion!

The prognosis based on renal inadequacy relates, of course, to the liability to grave uræmic consequences. The object of treatment is to avert these by measures either to increase the excretory action of the kidneys or to promote the vicarious elimination of the urinary constituents, and perhaps, also, to render the system tolerant of the over-accumulation in the blood of these constituents. The last of these three indications I have been led to believe may be in a measure fulfilled by opium; but the discussion of this point would be here out of place. Let it be supposed that notwithstanding the evidences of Bright's disease examinations of the urine afford proof of renal adequacy, what bearing has this fact on the treatment? The indication for diuretics, hydragogues and sudorifics is certainly wanting under these circumstances. I submit the inquiry whether it be not an error in practice too often committed to employ diuretics, hydragogues and sudorifics in cases of Bright's disease when these are not indicated? And, if not indicated, inasmuch as they are more or less perturbatory and debilitating in their effects, they are, of course, contra-indicated. I will cite for illustration a case which has come under my observation since I began to write this paper: A man about 50 years of age, of good habits, but for a long period overworked by his duties as a banker, for the last year or longer had felt a lack of his usual energy and endurance. In other respects he had no special ailments. There were no symptoms pointing to uræmia. He had noticed an increased quantity of urine. Two examinations of the urine showed a specific gravity of 1003 and 1008, and albumen small in quantity in the first, but considerable in the second examination. Casts were not discovered at either of these examinations. The quantity of urine furnished for the second examination had been passed in twenty-four hours and amounted to eighty-six ounces.

What were the indications for treatment in this case? There was not renal inadequacy. Diuretics were certainly not indicated. It was probably an object in the treatment to relieve the kidneys in a measure of the burthen of their functions by providing for some elimination by the intestinal canal and the skin, but employing for this object measures which are neither perturbatory nor debilitating. The great objects in the treatment were, evidently, prevention of further progress of the renal affection and promotion of tolerance. I presume that it will be admitted we have no knowledge of any special remedies for the first of these two objects. The treatment, therefore, must have reference to accessory conditions and to hygiene. As regards the prognosis in such a case, it relates to non-progression of the renal affection and to tolerance. Under favorable circumstances, life and a fair amount of health may continue for a long period.

Is the degree of renal inadequacy, as determined by examinations of the urine, reliable for judging of the absence of danger from uræmia? This question must be answered in the negative. In some cases of Bright's disease the quantity of excrementitious principles in the urine are notably diminished for a long period without the development of serious uræmic consequences. The explanation is, that these principles may be vicariously eliminated, or their accumulation in the blood takes place without toxical

effects because the system becomes accommodated to them, as opium or arsenic may be introduced in large quantities innocuously as a result of their habitual use. On the other hand, in some cases a moderate diminution of the excrementitious principles of the urine is followed by serious uræmic consequences, their vicarious elimination being inadequate, and toleration not having been acquired by habit. These facts are to be taken into account, in individual cases, with reference to prognosis.

The prognosis in cases of uræmic coma incident to chronic Bright's disease is always grave. Yet, every practitioner of much experience has met with instances in which the attacks have been severe, prolonged and repeatedly recurrent, without proving fatal. This fact shows conclusively that in these instances something is added to the chronic renal affection. This something may be an intercurrent inflammation, acute or sub-acute, to which I have referred in the first part of this paper, or it may be referable to what I have termed the accessory conditions involved in the toleration of the renal affection. The fact, it is needless to say, is of much importance as furnishing a powerful motive for the employment of efficient measures to avert impending danger. Of acute pulmonary œdema the same may be said as of uræmic coma. In my experience, thus far, of the grave manifestations of uræmia, the greatest is dyspnœa, called by some writers "renal asthma," which is independent of any pulmonary affection, and attributable to a toxical effect upon the respiratory centre in the nervous system. I cannot recall an instance among the cases which have come under my observation, in which this symptom has not been the precursor of a fatal termination. I have known, however, life with fair health to continue for years after an attack of acute pulmonary œdema incident to chronic Bright's disease, and apparently for a time placing life in imminent danger.

In this brief paper I have introduced topics which might readily have led to a much more extended consideration than I have given to them. My purpose has been, not to consider these topics as fully as their importance claims, but to offer them for discussion by those present at this meeting. In order to allow time for their discussion, I have designedly limited the length of my paper. In conclusion, I will recapitulate the points to which is invited the attention of those who are to engage in the discussion.

1. Acute Bright's disease, as a rule, does not tend to a fatal result, nor to eventuate in a chronic affection.

2. A sub-acute diffuse nephritis having the same seat and character as acute Bright's disease, exclusive of acuteness, occurs not only after scarlet fever and other infectious diseases, but irrespective of these. Occurring in other pathological connections, or as a primary affection, it is liable to be overlooked, and, if recognized, it is liable to be mistaken for a chronic form of Bright's disease.

3. Acute Bright's disease or a sub-acute diffuse nephritis not infrequently occurs as an intercurrent affection in the course of Bright's disease.

4. A susceptibility to the causes of inflammation of the uriniferous tubes, irrespective of the existence of chronic Bright's disease, is to be recognized as an individual peculiarity.

5. Chronic Bright's disease may exist as a latent affection for an indefinite period, provided the danger to the kidneys is no more than an equivalent to the loss of one of these organs, and provided the functions of the other organs of the body are well performed, and provided the laws of health are observed. The disease may be well tolerated so long as the renal affection does not progress, and the accessory conditions are favorable.

6. The adequacy of the functions of the kidneys has relation chiefly to the amount of excrementitious elimination of these organs, and this amount may be determined with sufficient exactness by ascertaining the specific gravity of the urine and the quantity in a given time. If there be not inadequacy, the treatment by diuretics, hydragogues and sudorifics is not only uncalled for but hurtful.

7. The danger from the accumulations of the constituents of the urine in the blood is not in all cases determinable with accuracy by ascertaining the amount of renal inadequacy, owing to variations in the efficiency of vicarious elimination, and in the tolerance from habit of these constituents.

8. Uræmic coma, occurring in cases of chronic Bright's disease, may be incident to an intercurrent temporary nephritic inflammation or to accessory conditions, so that if impending danger can be averted, restoration to the state of health which existed prior to its occurrence may be hoped for. This statement applies also to acute pulmonary œdema.

9. Renal asthma is generally, if not invariably, a fatal prognostic.

SOME CAUSES OF TARDY FIRST STAGE OF LABOR, AND THEIR TREATMENT.[1]

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The following cases have been of interest to me, and I trust will be so to others. Most of them represent instances of certain forms of dystocia, which are neither new or very rare, and the treatment of which is often a matter of censure to the accoucher.

Case 1.—Mrs. M., æt. 28, born in England, a very light blonde of more than medium height, and apparently well formed, was taken in labor with her first child early in the morning of February 18th, 1883. Her previous history was uneventful in a clinical point of view, no evidence having been elicited of any protracted or violent illness, or of hereditary taint of any kind. The pains were not at first severe, but became more so as the labor advanced. I saw her in the evening of the 18th, when I found the os dilated to about the size of a quarter of a dollar, thin, but soft, and not sensitive to the touch. During the pains the bag of water, which was very small, seemed to press but lightly through the os. Through the membranes the presenting head was felt in an attitude of semi-extension, with the anterior fontanel

[1] Read before the Philadelphia Obstetrical Society, on Dec. 3, 1885.

occupying nearly the centre of the field. The occiput was directed toward left acetabulum. The presenting head was held at the superior strait, and did not advance during a pain, but it so closely fitted the lower segment of the uterus as to completely separate the amniotic cavity above from that below, and prevent any addition being made to the small amount of liquor amnii contained in the bag of waters. Nor did the head show any disposition to become flexed either during a pain or its absence.

Labor continued with moderate pains during the 19th and 20th, with but little effect upon the os so far as could be perceived by the touch, although it was evident that a very slow dilatation was being effected. The condition of the patient during this time remained good, and gave no occasion for anxiety or alarm. On the morning of the 21st, the fourth day of labor, however, symptoms of exhaustion became apparent. The pulse ran up to over 100, and increased bodily heat was associated with a tendency to dryness of the mucous surfaces. Still, but little progress had been made in accomplishing the dilatation of the os, which was at this time opened to about the size of a half dollar. It was still impossible, without artificial dilatation, to attempt either version or forceps delivery. The head had not advanced and still plugged up the lower segment of the uterus as effectually as ever.

Two courses were open to me: One was to dilate the os artificially and apply forceps or turn; the other was to support the patient's strength by securing to her needed rest, while at the same time promoting perfect relaxation of the soft parts, hoping that sufficient dilatation would, under this treatment, soon enable me to rupture the membranes, when the head, being exposed to pressure from the uterine contractions above it, would fairly engage, and, it was hoped, descend through the os uteri and the superior strait. The latter course was chosen, and in order to carry out the treatment a sixth of a grain of sulphate of morphine was given every four hours, while the severity of the pains was still further mitigated by inhalations of chloroform at the beginning of each pain. Under this treatment the general condition of the patient improved; she slept regularly between the pains, and in that way got much rest. By 10 o'clock in the evening sufficient dilatation had been secured to justify me in rupturing the membranes, when the head descended and soon the second stage of labor was established. This terminated successfully for both mother and child at about 11 o'clock that evening. Thus was the labor happily and successfully concluded after a duration of about ninety hours, by the use of constitutional means alone.

The external measurements of the pelvis subsequently taken with care showed the following dimensions:

Between ant. sup. sp. processes.....	8¼ inches.
Between crests.....	10⅞ "
External conjugate.....	6½ "
Real conjugate by inference.....	3½ "

The relation of the measurements of the distances between crests and anterior superior spinous processes precludes, almost to a certainty, the existence of a rachitic pelvis, and as all the measurements were somewhat below the normal, the small pelvis was probably one of those in which the sexual development of the pelvis was imperfect, that is, arrested in its progress. The attitude of partial extension observed in the fœtal head in the case just given is explained by the fact that the extremities of the narrowed conjugate diameter formed the points of resistence to the descent of the head, and as these would naturally offer much more obstruction to the descent of the greater diameters near the occipital extremity than to the narrower ones near the face, the latter extremity would of necessity descend first. In the last day of the labor I had the benefit of the advice of Dr. Albert H. Smith, who then, for the first time, saw the case with me.

Case 2.—On March 25th, 1885, I saw, in consultation with Dr. Hampton, Mrs. M., in labor with her first child. She had been in labor for nearly twenty-four hours without making any great apparent progress. On examining I found the os dilated to about the size of a half dollar, and presenting no abnormal conditions. The bag of waters was small and did not seem to press with any force through the os during the pains. The head presented in the second position, and was held in a partially flexed attitude at the superior strait. The patient was much alarmed at the slow progress she was making, so that the pains were becoming very rapid without materially aiding in the advancement of the labor. The treatment adopted in this case was rest in bed, one-sixth of a grain of morphia every four hours, and inhalations of ether at the beginning of each pain. The membranes were ruptured as soon as a greater amount of dilatation had been secured, and twelve hours after I saw the case she was safely delivered of a living child. No opportunity was afforded me to measure the pelvis after the termination of the labor.

This case differs from the first in degree only, the nature of the impediments to the progress of the labor being the same. In both the dilating wedge usually afforded by the bag of waters was wanting, because the closely fitting head prevented access of any considerable amount of liquor amnii to that part of the amniotic cavity which was in advance of it, and the head itself did not advance because it was held at the brim of the pelvis by the narrow conjugate. While in normal labor, before the membranes are ruptured, all parts of the fœtus are exposed to a like pressure, because that pressure is communicated to it by the liquor amnii; when the head cannot advance, and at the same time prevents any part of the liquor amnii descending past it into the bag of waters, this equilibrium of pressure becomes destroyed, that part of the fœtus which lies above the line of contact of the head with the uterine walls receiving the full force of the contractions of the uterine muscles, while that part which is below only receives the force of resistance offered by the cervix. Hence, when the latter is soft and dilatable a process of molding, or adaptation of the presenting part of the head, occurs, during which the most depending part gradually approaches the os and tends to dilate it by affording

that dilating wedge which is absent at an earlier period of the labor. When the head, by this process, approaches so close to the membrane closing the os as to exert considerable pressure upon the latter, all further moulding ceases, but at the same time dilatation of the os becomes more rapid, so that soon it will have progressed to a sufficient degree to justify rupture of the membranes. The effect of such rupture is to relieve the head of all impediment to the further progress of moulding and elongation. It is now thrust downward, and if the pelvic narrowing is not great will soon pass through the urine and into the os. The latter being exposed for the first time to the whole dilating power of the uterus, readily yields.

The peculiarity of the first stage of the labor, which in all its important bearings upon the welfare of the woman and fœtus widely distinguish it from the second stage, is that so long as the membranes are intact, the relations of the two beings to each other are precisely the same as those existing during the course of gestation, so that almost indefinite delay is perfectly consistent with the entire safety of both. Notwithstanding this fact the first stage of labor is often a period of great danger to both. The danger to the mother is from exhaustion, and exceptionally from rupture of the uterus; that of the fœtus is from asphyxia, due to the too frequent or too powerful uterine contractions. The mother will only become exhausted when the pains become so frequent, so violent, or so long-continued that she is not able to restore her strength from time to time by sleep and perfect rest between the pains. The same condition with regard to the nature of the pains, early rupture of the membranes, and probably some abnormal state of the tissues of the uterus are essential to the production of rupture of that organ. The risk to the fœtus is due to the same condition of the uterine contractions as those which impair the mother's strength, in which the time intervening between the pains is not sufficient for the removal of the vitiated blood from the maternal part of the placental circulation and the supply of arterial blood in its place.

In considering the relations of the woman and fœtus to each other, and the nature of the dangers which threaten each in the first stage of labor, the indications for treatment might seem to be obvious. They are to preserve the proper strength and rhythm of the uterine contractions in order to secure needed rest to the mother, and sufficient regularity in the placental circulation to supply the fœtus with enough oxygen for its preservation. When, therefore, it is obvious that from any cause the dilatation of the os uteri must be a prolonged process, we should take care to protect both the woman and the fœtus from danger during its progress. Even weak uterine contraction may, by becoming nearly continuous, produce the dangers already alluded to, and so while endeavoring to strengthen them, care must be used to preserve their rhythm. In the cases which I have reported this principle was adopted in treatment. Nothing was done until the pains became abnormal in character, when the measures already detailed were instituted. In both cases morphia was used by the mouth; in one case inhalations of chloroform, in the other of ether, were used in conjunction with the opiate. In view of recent experiment there can be no doubt that ether is the safer remedy of the two, and yet it possesses so many disadvantages when compared with chloroform, and the risk from the latter when carefully used in these cases and in conjunction with the use of opium in some form is so slight, that it is a question in my mind whether we are not often justified in using chloroform in preference.

During the first stage of labor, if no painful operation is to be performed, it is not necessary nor even desirable to produce entire unconsciousness. The anæsthetic is given to mitigate pain, not to entirely destroy the consciousness of it, and at the same time to prevent both mental and uterine irritability. Opium and chloroform supplement each other to a great extent, so that when the effects of the two are combined a much smaller dose of each is required to produce a given effect than when either is used alone. This is not so with opium and ether, or to so slight an extent as to be almost inappreciable. While in a woman in labor who is under the moderate influence of opium, but a small amount of chloroform administered by inhalation is sufficient to give all the relief from pain needed. The quantity of ether to be used to produce the same beneficial effect will not be found to be less than when no opium has been given. The practical result of this relation of the remedies to each other is that in the former case the patient's suffering is relieved at once, while in the latter some time is required before any decided amelioration is experienced. In support of the above assertions I may be permitted to quote somewhat at length from the able paper of J. C. Reeve, M.D., of Dayton O., which appeared in the *American Journal of Medical Sciences* for July, 1880. In the course of his review of Dr. Kappeler's book on "Anæsthetics," Dr. Reeve says: "The modification of the ordinary course of anæsthesia by the preliminary injection of morphia deserves attention. . . . It is claimed for this 'mixed narcosis' that it is especially adapted to prolonged operations by rendering a far less quantity of chloroform necessary, the anæsthesia being continued with far less frequent repetition of inhalation, that the stage of excitement, both muscular and mental, is lessened, and that thereby the dangers of anæsthesia are diminished. Mollow, one of its enthusiastic advocates, goes further, and claims that the action of the morphia lessens irritability of the air passages, and so restrains reflex action upon the heart; that in this respect its effect is similar to division of the *par vagum;* also that the morphia in small doses increases the blood-pressure by its action on the motor ganglia of the heart and by its contraction of the peripheral vessels, thereby opposing the chief deleterious influence of chloroform from the beginning by presenting an opposition which must be overcome before the vascular pressure can sink below the normal." As to the smaller quantity of chloroform necessary for a given length of anæsthesia, the less amount of muscular excitement and the modified mental condition, Dr. Kappeler says "the ad-

vantages have been on various sides clinically proved, and are only seldom called in question." The advantages claimed by this method have been denied by Demarquay, but confirmed by Heitel, and in part by König. The latter does not, however, believe that the dangers from chloroform are at all diminished by the use of morphia. Dr. Reeve further stated that "none of the advantages of chloroform-morphia narcosis attach to ether-morphia narcosis," and that Dr. Kappeler's "experience . . seems to show that in all respects the combination is injurious rather than beneficial."

Reference is made in the paragraphs which I have quoted to the use of the agents mentioned in surgery alone. They apply in the main to obstetrics as well, although I do not see any disadvantage in theory, nor have I in practice, in the ether-morphia narcosis as compared with ether narcosis alone. In comparing the effects of chloroform and ether in the first stage of labor, the former has, I believe, a decided advantage in its effects upon the os uteri, in promoting relaxation. All the advantages above attached to it are at the same time coupled with its easy and pleasant administration. Against these, however, must be offset the danger from its use. Exactly how great this danger may be in careful hands, cannot be told. In many cases of fatal chloroform poisoning it has been the first few drops that have killed; in such cases, therefore, the diminished amount rendered necessary by the morphia previously given would be no safeguard. I believe, however, that the danger is so infinitely small when thus given that we are justified in using it in painful cases of labor, especially when the chief difficulty lies in the rigid condition of the cervix or other soft parts of the parturient canal, and that in such cases the use of morphia either by the mouth or hypodermically in moderate doses greatly facilitates accomplishment of the end in view. At the same time I would not be understood as advising the use of chloroform instead of ether in ordinary cases of painful labor. Since in these the only object is to relieve pain, ether answers the purpose, and being the safer remedy, should be preferred.

Another cause of tardy first stage of labor is *premature rupture of the membranes*. This accident is apt to interfere with the progress of labor in the stage of dilatation by the absence of the dilating cone formed by the membranes in normal cases, and by direct contact of the presenting part of the fœtus with the uterus. Owing to the former the uterine force is exerted at a disadvantage, and by the latter the os is apt to become rigid, dry and sensitive, while the mother's suffering is much increased. The fœtus is exposed to exceptional risk when obliged to pass through the entire stage of dilatation of the os without the protection of the liquor amnii, for not only are its parts subjected to injurious pressure, but owing to the much greater degree to which the uterus can contract, the interruption of the supply of maternal blood to the placenta is much more complete; yet it is possible for the fœtus to retain perfect vitality for many days after the escape of the liquor amnii, as is shown in the following cases:

Case 3.—Mrs. M., æt. 38, sent for me in June, 1878. I found her pregnant with her eighth child. She was in a state of great anxiety on account, as she asserted, of the escape of the waters which she told me had come away in large quantities. Examination did not convince me of the accuracy of her statement, and I concluded she had mistaken the source of the aqueous flow. One thing was certain, however, and that was that she was not then in labor, although very near her time. She was enjoined to keep quiet, though rest in bed was not insisted upon. Five days afterwards I was again sent for, and found her in the first stage of labor, but no membranes could be felt. She was safely delivered of a living child.

If the membranes really did rupture at the time supposed, this is the longest period between the rupture of the membranes and the coming on of labor I have met with personally, but the following cases represent the possibility of the preservation of the vitality of the fœtus under these unfavorable circumstances for a much longer period: Dr. Matthews Duncan reports a case in the *Lancet*, for June 29, 1872, in which forty-five days elapsed from the time of the rupture of the membranes to that of the birth of the child. During the whole of this period the liquor amnii continued to escape as it was secreted, and the size of the uterus as felt through the abdominal walls was greatly diminished. When labor took place a seven months fœtus was born, and lived for several hours, although much deformed by the protracted pressure to which it had been exposed. In the *Medical Times and Gazette*, for Sept. 18, 1852, Dr. John Gould reports a case in which twins, a boy and girl, were born, living five weeks after the water had come away. Although the above cases are well authenticated, especially that of Dr. Duncan, in which the most careful observations were made, yet the asserted escape of the liquor amnii must be always received with great caution. The sources of the aqueous flow which may be mistaken for the liquor amnii are numerous. The spontaneous escape of urine is not infrequently mistaken by the patient for that of the liquor amnii, while the flow of profuse secretions of Cowper's glands; the rupture of a cyst of the chorion; of another developed or undeveloped ovum; of a cyst lying between the chorion and the amnion, may prove the source of the supposed liquor amnii.

That the membranes may again close after having been ruptured has been proven. This is not accomplished by a process of healing, as was at one time supposed, but by the sliding of the different layers, of which the membranes are composed, upon each other, by which a small opening may be effectually closed. After closure of the amniotic cavity in the manner described, the liquor amnii again collects, for this fluid is continually secreted, as first shown by Winkler, and demonstrated in Matthews Duncan's case.

A source of error in diagnosis as to the origin of the flow is in rupture of the membranes at a point within the borders of the os and out of reach of the examining finger. Here vaginal examination shows

the presence of the membranes closing the os, and which become tense during the pains, while the opening becomes patulous and admits of the escape of the liquor amnii during the periods of relaxation. Notwithstanding the occasional occurrence of cases such as I have just given, the usual result of the escape of the waters, at whatever period of gestation it may occur, is to precipitate immediate labor, and this labor, as already shown, is unusually distressing to the mother, and at the same time subjects the fœtus to increased risks. We have seen that the peril to the fœtus is due solely to the persistence or the frequency and violence of the pains, interrupting too frequently, too persistently, or too completely the supply of maternal blood to the placenta.

The abnormal pains are not alone due to the irritation of the mouth of the uterus by the direct contact of the fœtal parts with the uterus, but also to the mental condition of the woman. Most women view the occurrence of rupture of the membranes at the beginning of labor with anxiety and alarm, and such a state of mind is very apt to be reflected injuriously upon the action of the uterine muscles. Hence care is necessary in the conduct of such labors, first of all to reassure the patient, then to enjoin rest as soon as the pains come on, and, if they are at all disposed to assume an abnormal character, to keep the woman constantly in bed and give opiates to control the severity of the pains, to preserve the proper rhythm of the contractions, and to favor dilatation of the os.

Before closing this paper I wish to refer to another, though kindred, subject. I allude to the obscure symptoms sometimes occasioned in the parturient woman by the presence of intercurrent acute disease. I have several times been deceived by symptoms due to the malarial poison becoming manifest during labor, or in the lying in period, which have in the one case closely simulated approaching exhaustion, and in the other acute local inflammation. Sometimes the manifestations of the presence of this poison consist of chills, followed by fever, while in other cases there is more or less severe neuralgic pain alone. When the previous history of the patient has been obtained, and such history shows the presence of the malarial poison, the diagnosis of the true nature of the symptoms is not difficult, but it is so when no evidence of previous symptoms of intermittent fever is attainable. The following case is one of this character:

Case 4.—Mrs. C., æt. 22 years, was taken in labor with her first child early in the morning of June 8th. As she had been referred to me for attendance in confinement by her regular medical attendant, I had no opportunity of obtaining a personal knowledge of her previous health. I learned, however, that in so far as she knew she had never suffered from malarial poisoning; but she had suffered very much from almost nausea and frequent vomiting at the beginning and towards the close of her pregnancy. The labor continued throughout the day, and in the evening became quite severe. The vertex presented in the first position. As the os dilated but slowly, and the patient's sufferings were severe, I ordered her to take a full dose of morphia. An hour or two later her symptoms were not satisfactory; her pulse was beating at the rate of more than 100; her mouth showed a tendency to dryness, constant thirst existed, and the patient frequently vomited bilious matter. Although the uterine contractions were very painful and frequent, they were short, weak, and inefficient, when the patient had been over twenty hours in labor. As the os was pretty widely dilated, I decided, in view of the symptoms, to apply the forceps and establish the second stage of labor, believing the physical strength of the patient to be sufficient to safely accomplish the subsequent stages of delivery. She was accordingly etherized to complete unconsciousness, and the head of the child brought through the os and down upon the floor of the pelvis. The forceps were then withdrawn. As the effect of the ether passed off good expulsive pains came on, and in due time a living child was born without accident.

The mother did well for the first nine days after delivery, although the frequent pulse continued, with much coating of the tongue and some headache, but without any febrile symptoms whatever. On the tenth day, however, while still kept in bed, she was seized with pain in the left iliac region, which, on the following day, became violent, and did not yield to the small quantity of opium (a remedy which she could not take without very disagreeable symptoms) which I induced her to take. This pain was not accompanied by fever, and I had no doubt was malarial in its origin. Acting upon this belief, she was placed upon full doses of quinine, when not only did the pain speedily disappear, but with it the frequent pulse, the headache, and nausea. The patient had come to live in the house in which she was confined but a few months before her confinement, and the first evidences of the presence of the malarial poisoning in her system were those which appeared during her labor and subsequent lying-in. The dryness of the tongue and much of the nausea appearing during labor were probably due to the opium I had given her.

THE ÆSTHETIC APPLICATION OF DENTAL ART.[1]

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On different occasions during my period of practice, I have been requested by patients to explain why it is that dentists seem to know so little about art. What can I say, more than to confess that I do not know? I have found repeatedly that such a reply does not in any sense afford satisfaction to the inquirer, or tend to extricate me from an embarrassing position, but only serves to push me more deeply into difficulties. The query in the outset was prompted, probably, by a passing thought, and had they received any convincing reply, their momentary inquisitiveness would have been gratified and the subject dropped then and there. But, perceiving my inability to give any rea-

[1]Read before the Annual Association of the Boston Dental College, Boston, October 13, 1885.

son why a profession so entirely made up of artistic requirements, should have no facilities for cultivating an æsthetic taste in the dental colleges, their curiosity naturally became aroused, and I regretted that I allowed them to see that the question was too much for me.

And can we wonder greatly that such questions meet us, when we reflect that one of the two more important branches of dentistry consists entirely in restoring nature by art? What is Art? Of all the short words in our language there are but few which are handled more frequently, and that, too, by persons who really have but a faint idea of what those three letters signify. How many of the thousands of sight-seers who visit the galleries of our own and foreign countries, and are thus permitted to look upon the work of celebrated artists, comprehend that the creations before them are the result of the careful study of a lifetime. They are only conscious of the general effect of a work of art, and do not realize what a vast amount of study and labor is required to attain such grand results.

For the sake of illustration, let us for an instant glance at a painting. The artist has presented his work true to life; almost too much so to be pleasant. It has been truly said, that, next to the actual pain experienced in being a party to sorrow is the touching suggestion which a faithful picture communicates. Wandering over the canvas, our eye first notes the general interest; we remark the excellency of the drawing, the perspective, and the coloring, but soon our attention becomes riveted on the central object, a representation of an old woman, a glance at whose face at once proclaims the *special* motive of the work. The scene is a court of justice, with all of its characteristic stiffness and its unpleasant suggestiveness. Spectators are there with faces full of feeling. The learned lawyers, in powdered wigs, are there true to life, while, in contrast, stands this poorly-dressed woman before the judge who is about to pass sentence of death upon an only son. She is offering a mute appeal—no words of supplication; but the trembling arms and old withered hands outstretched, tears flowing over wrinkled cheeks, the intense agony so plainly depicted on every feature, is an appeal more touching than any eloquence the tongue could have offered. Such a picture commands the attention of every beholder; but how few realize what an immense amount of work it required to reach such a mark of perfection. What an insight into human nature was called for to enable the artist to portray this touching scene. Do they reflect upon the fact that a knowledge of anatomy, physiology, and other studies are required, as well as of colors and their application? Many persons have a faculty of painting a fair representation of the human face upon canvas—they are said to be talented in that respect. But if they expect to approach anywhere in the vicinity of perfection, they must be acquanted with the forms of the bones of the head, as well as the muscles and softer tissues. How can they truthfully give the form of the outside without some knowledge of the framework within.

Now, if this knowledge is indispensable to an artist, why should it not be equally desirable that the mechanical dentist should be conversant with its principles also? An artist, by making himself intimately acquainted with the human form, and by his perceptiveness, power of imitation, and deftness of hand, can place a representation of it upon canvas. He can counterfeit any feature and bring forward any expression. If his work be sculpture, he does away with deception by placing actual shape before us. The one deceives the eye by light and shade, the other gives us substance, the natural light contributing the appearance by which we distinguish the different forms of objects. With the dentist, the object is the same; but, unlike the former, he has not blank canvas or hard stone to work upon, but has living tissues on which he can learn to put different expressions. Many will say that expression comes from the mind, and that we have no control over it except in our own features. True, it comes from the mind, but it shows itself upon the face, and different expressions are but the result of the action of different muscles in moving portions of the skin (and underlying tissues) so that a new light strikes upon it; this varying light, with its consequent shade, adds a new aspect to the countenance.

An artist can change the whole expression of a painted face by the addition of a little extra light and shade, and that with but a few strokes of the brush. All he does is to *apparently* raise some portions with light and cause others to recede by rendering them a little darker. If colors will change the countenance by appearing to raise portions, is it not patent that *actually* raising those parts will do it even better. It takes but the slightest change in position of the lips and adjacent parts to make a great change in expression. You will put greater faith in this assertion if you will experiment a little yourselves. Take a portrait, or, better, two, precisely alike. The lithographs such as are exhibited in the street-windows by theatres will answer every purpose. It will be best if we choose a lady's face, as it is with the ladies' features, principally, that we will wish to utilize our knowledge, if it be found worthy of use. It is, we will say, a full face, and one with a pleasant look about the features. Now with a crayon make a short downward mark from each corner of the mouth on one picture only, as we will need the other for comparison; then with your finger-end rub in a little white just under the lower lip, adding a trace of shade to the upper lip in the same manner. What is the result? You have a face the owner of which you would think had not an earthly friend. Now, after erasing what you have added, reverse the order of things by placing the light on the upper, the shade on the lower, and drawing your lines upward from angle of mouth, instead of down, as before, and you will find the result reversed also: for the face is found now to be bright and cheerful. By going a little further, and placing two curved lines from base of nose downward, past corners of mouth, with convexity outward, you have a grin that will often prove contagious. A thin piece of paper placed under the lip on the alveolar ridge, will add its quota to the expression.

These changes have been effected by a few marks that would be hardly noticeable anywhere else on the

drawing, unless about the eyes. If this can be done on paper, can it not be accomplished, say in part, at least, with the face itself? Of course, it is an entirely different matter when we come to put our theory into practice, as it will require that we educate the eye by long and close observation of nature, and teach the hands to follow its dictates. The lips, of all the features, are the most direct index to the feelings, and the expression characteristic of every face is due almost entirely to the effect of light and shade about the lips. It is (I believe) because we forget this fact, that we often feel dissatisfied with our work even when the patient expresses pleasure with it. I believe, too, that it is owing to the fact that the profession shows want of knowledge, care, or ability in this respect that we meet with so many faces whose owners wear features that are blank, or almost expressionless about the mouth. When we hear such common expressions as a beautiful smile, or eloquent lips, do we ever ask ourselves in what does this beauty or that eloquence consist?

Our course of studies in mechanics is, to the best of my knowledge, perfect as far as it goes; but is it carried out to its greatest extent? For instance, we are told to carefully note the play of the lips over the wax articulation; but *what is it* in the play of the lips that we are to study? I can but answer for myself. I was expecting to hear *expression* treated in every detail, and felt disappointed when, upon nearing a situation where I felt genuine interest, I found that the points which seemed to me of the utmost importance were passed over with a casual remark or two. I know when I say this that no one will infer that I am trying to pit my limited knowledge and experience against years of practical work of my instructors. Perhaps our teachers expected the students to understand without further instruction. Perhaps my classmates, by superior ability, were enabled to bridge over what seemed to me a break in the most interesting part of our course, or it may be that I am expecting too much of dentistry.

Now, the question is, how to proceed in order to derive any professional benefit from the ideas here suggested. As I regard it, the first requisite is to study nature, and study closely. As far as the human countenance is concerned, no one has more opportunity for observation than the dentist. Our business carries with it a certain license, so that we can examine a patient's features critically without giving offence. Unlimited chances are thus offered, and we can watch every face that we work over, and then we must analyze what we see.

Note the general expression, the fulness of the lips, and the tooth development beneath them. Watch where and how the light strikes the face, and what is the result of different lights upon the same features. If any teeth are absent, note the effect upon the expression. Observe color of hair, eyes, and complexion, and then examine the exact shade of the teeth, also the size and shape of the teeth as compared with size and shape of features, form of head, and general build of body. This can be done by a trained eye, while the patient undergoes the usual examination without suspecting but that your undivided attention is given to the teeth. Then compare this with the next face that presents itself. If this is to afford any benefit to the practitioner, the observation and comparison must be critical. We are too apt to bestow a casual glance, and forget as soon as the patient is gone, whereas we should memorize or make a note of the most important points.

To make ourselves *masters* of the art of light and shade, we must go even further than this. *We must cultivate a tast for art.* We subscribe for some one or perhaps all of the dental journals—why not for an art journal as well? We try to keep ourselves posted on all the new ideas in our profession—why not mix up a little art with them? Suppose that we cannot see at first that it is benefiting our work, we cannot deny that it is refining, as well as affording a pleasant change from an occupation that is in many respects disagreeable. Then when we have leisure we can turn our hands to a little modelling.

If we have a small space in our laboratories, why not utilize it by making a bench in a corner that has a good light, and then investing in a few pounds of artists' clay and one or two modelling tools. By an hour's work and the outlay of a few dollars, and we have a way of passing our spare moments that will be novel and instructive. For it is in modelling and casting that the effect of light and shade is made most manifest. If we have doubts of our ability to reap any benefit from modelling, why not try casting, choosing a friend or a patient's face for a subject? Suppose that we try it in this way, our subject being a person who wears a full denture and with a bare face? First make a mould of the face (wax will answer) with the mouth empty. Then one with the plates in position, and then, after building up with wax in different places on the plates, place them in the mouth and make a third mould. Now to cast with plaster. The wax mould will of necessity be thin, so that it is best before casting to build up around the outside of the mould with sand so that the weight of the plaster, when soft, will not change the shape. Then if you will tint the water with powdered or dry umber and a little vermilion before you mix the plaster, the latter will more nearly resemble the flesh-color. After casting all three, and allowing the plaster to set, if you will remove the wax from each you will be surprised at the entirely different expression on each face. The question is, where you will find a person who will submit to so much trifling? I have experimented with many different faces, and thus far they have been so deeply interested in the novelty of the work that I have yet to meet the first complaint. In conclusion, let me say that I believe that if dental practitioners who have never tried this, would do so, they would be surprised and pleased with its effect upon their laboratory work. At first, I became discouraged, and thought that I failed more often than I succeeded; but now, when I look back I find that I have not failed. On the contrary, I have succeeded so far that now I am where I can see what can be accomplished if one is perseverant. I am convinced that the study of facial expression has helped me wonderfully, and has given a new impetus to work

that before seemed monotonous. One thing in which I think all will agree with me is this, that a little art cannot injure us in any way, even if it is æsthetic.

Cambridgeport, Mass., Oct. 13, 1885.

AN ADDITIONAL CASE OF ACUTE PHTHISIS—QUICK CONSUMPTION—RECOVERY.

BY P. C. JENSEN, PH.C., M.D.,

OF CHICAGO.

Mrs. A.; age 27 years; married; mother of two children. Family history of phthisis on mother's side. Lost one brother of pulmonary tuberculosis, at 23 years of age, about one year ago. The appearance of Mrs. A. when first seen by me was that of extreme emaciation. Her anæmic and debilitated condition gave her a dull and sallow expression, exhibiting with marked distinctness that peculiar white pearly and glossy appearance of the sclerotic, and ocular conjunctiva so characteristic in phthisical subjects.

The patient had suffered considerable loss of strength from a long-existing menorrhagia, to such an extent as to reduce the inter-menstrual period to ten days. During this inter-hæmorrhagic interval she suffered additional exhaustion from a profuse leucorrhœa. She was troubled with a severe cough, worse in the afternoon, and continuing until after midnight. She expectorated large quantities of yellowish green, tenaceous, but putrid matter.

Toward morning she saturated her clothing with a profuse and debilitating perspiration. Her temperature reached 102° in the afternoon, but was subnormal in the morning. Respiration was bronchial in character, 32 per minute. Pulse 140. She experienced a great deal of pain in her left side, and suffered from an almost continued vertical headache. Excessive coughing induced at times a reflex nausea.

There was decided bronchial respiration in the left lung. Increased vocal fremitus and a variety of dry, moist and crepitant râles were audible over the superior anterior two-thirds, and superior posterior one-half, of her left lung. Right lung not affected. The patient had no appetite, her bowels were constipated, and her vital powers greatly exhausted, due to destructive retrograde changes instituted within the pulmonic tissue.

By active therapeutic interference, consisting of tonic, nutritive and restorative treatment, and by the administration of remedies having antiseptic influence over pulmonary retrograde processes; also by the additional salutary effects afforded in checking exhausting discharges, viz: menorrhagia, leucorrhœa, and night-sweats, the patient soon gave evidence of improvement, and before long was convalescent. Each case demands a therapeutic difference in treatment, according to the stage of the disease, the peculiarity of the local lesion, its symptomatology, complications, etc., and therefore such variation should consist in the prudent administration and application of rational medicine, so that each remedy shall meet a certain, definite indication.

Each case must be treated upon its own merit. For the menorrhagia and night sweats ferruginous preparations, ergot and belladonna were given in combination after meals; iodoform for its local antiseptic effect upon the lungs. Nux vomica, maltine, digitalis, comp. syr. of hypophosphites, etc., were administered for their tonic, nutritive and restorative influence. The patient is restored to a condition of healthfulness, with no apparent symptoms of return of her disease. November 15th an examination revealed normal vesicular respiration. She has no cough, no pain; has gained ten pounds in body weight in the last thirty days. She is doing her own housework.

It must be remembered that there exist various forms of consumption, which differ clinically. Each case therefore requires a difference in treatment. Again, in the same case there is a development of symptoms forming stages of the disease, each stage demanding its own treatment. Some forms of phthisis, if not too far advanced, admit of recovery. Other forms, especially well advanced cases, speedily or slowly run on to a fatal termination. Pulmonary therapeutics, by means of the Pneumatic Cabinet, can be efficiently applied directly to the respiratory mucous membrane of the air vesicles, with beneficial results, in connection with the medical treatment.

Room 508, Chicago Opera House, Chicago.

OSSIFICATION OF THE CHOROID.[1]

BY LYMAN WARE, M.D.

OF CHICAGO, ILL.

Although calcareous formations within the eye are of frequent occurrence, osseous formations are not so common but that the following case may be instructive both pathologically and clinically. For a long time all hardened deposits in the eye were considered calcareous, and the formation of true bone was much doubted. Knapp collected and studied quite a number of cases of ossifications within the eye, which he published in the *Archives of Ophthalmology and Otology*, Vol. ii, pp. 1–35. At that time he considered the capillary layer of the choroid the origin of all intra-ocular ossifications. Since then a number of cases have been reported (Knapp's *Archives of Ophthalmology*, Vols vi and ix) in which they occurred in other structures.

The formation of bone is usually preceded by prolonged and frequently severe intra-ocular inflammation, and is generally of traumatic origin. The development of bone requires no other antecedent condition than a vascularized connective tissue.

The following is a brief history of a case that came under observation: Mr. J. D., farmer, æt. 20, of American birth, when 9 years of age was struck accidentally in the right eye with the handle of a pocket-knife, which completely and instantly destroyed vision, and caused severe inflammation in and about the eye, accompanied by great pain and much distension of the ball and surrounding tissues. This continued for several weeks. During the five or six subsequent

[1] Read before the Chicago Society of Ophthalmogy and Otology, October 13, 1885.

years the injured eye caused little or no trouble. During the winter of 1875 and 1876, when he was 16 years of age, or seven years after the accident, as a result of severe exposure the injured eye again became painful, at times better, at times worse. Pain usually subsided in a few days if the patient remained quiet in a darkened room, and made frequent hot applications to the eye. In the winter of 1880, left eye began to be somewhat sensitive to light, particularly to artificial or light reflected from snow.

The patient was first seen in July, 1880. The R. or injured eye was somewhat atrophied, tension greatly diminished, and slightly tender on pressure, although not markedly so. In the L. eye there was photophobia, lachrymation, slightly sluggish pupil, and supra-orbital neuralgia. Vision for the distance tolerably good (V. = $\frac{15}{20}$), but it was quite impossible for him to read even Jæger No. 11 more than a minute or two on account of the lachrymation and ciliary neuralgia which it induced. Ophthalmoscopic examination showed well-marked neuro-retinitis.

I advised immediate enucleation of the injured eye, but it apparently gave him little trouble, being only slightly painful at times, and as he was a farmer, he did not like the idea of wearing an artificial eye and submitting to all the inconvenience such an eye entails. He declined to submit to the operation and returned home. In the latter part of August, five or six weeks after his first visit, he returned to the city and was quite willing to submit to the enucleation of the injured eye, as his symptoms had grown much worse after reaching home. Tenderness on pressure of R. eye was much increased, and the eyeball intensely injected. In the L. eye considerable pain and supra-orbital neuralgia, sluggish pupil and photophobia. V. = $\frac{20}{20}$.

August 20, 1880.—Patient advised to remain quietly in darkened room and take the following:

℞ Dover's P..... grms. 2.
Quiniæ Sulph..... 3.
Div. in cap. No. 20. S. One every four hours.

August 24.—Inflammatory symptoms not so great; ether was administered and the injured eyeball removed, although with some difficulty, owing to its atrophied condition, and the dense fibrous adhesions which completely surrounded it.

August 25.—Patient fully recovered from the effect of the ether, and the ciliary neuralgia less than it had been for months. Ordered pil. proto-iodid. hyd. (gr. ¼), one three times daily.

September 10.—Wound nearly healed, neuralgia entirely absent; vision much improved ($\frac{15}{20}$), and patient allowed to return home, but advised to take the following alterative for six weeks or two months:

℞ Pot. Iodid..... grms. 16.
Tr. Cinchon. rub..... 20.
Syr. Sarsap. Co..... 14.
M.
S. A teaspoonful three times a day, in water after meals.

December 4.—Patient returned to the city for artificial eye; no recurrence of neuralgia and vision fully restored (V. = $\frac{20}{20}$).

The eye was placed in Müller's fluid for several weeks, then in absolute alcohol, and after three months was partially divided in its equatorial diameter. The vitreous was liquefied and immediately escaped, leaving the retina in the form of a cord extending from the fundus or posterior portion of the ball to the anterior, where it expanded funnel-like and enclosed a calcareous lens. The ossification was situated in the choroid, its thickest portion corresponding with the entrance of the optic nerve.

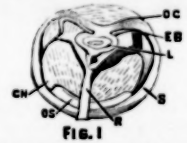

FIG. 1

FIG. 2

FIG. 1.—Antero-posterior section of the eye; *OS*, ossification; *R*, retina passing through it and cord or funnel-like extending forwards to the calcareous lens; *S*, sclerotic; *L*, lens; *CH*, choroid; *CB*, ciliary body; *OC*, opaque cornea.
FIG. 2.—Ossification (full size).

FIG. 3

FIG. 4

FIG. 3.—Microscopical appearances, with No. 4 object-glass.
FIG. 4.—Appearance under No. 10 immersion lens.

The eyeball was somewhat atrophied, measuring a trifle over two centimetres in the antero-posterior diameter, and a little less than two centimetres in its equatorial axis. The ossification measured fifteen mm. in length, concavo-convex; the concavity looking forwards, and from four to eight mm. in width. Measured from the optic disc it was a few mm. longer on the outer than on the inner side. Its greatest thickness, which was at the optic disc, was two mm. The posterior or convex surface of the bone was well-marked with choroidal pigment. Five years have now elapsed since the enucleation, and no relapse has occurred in the eye sympathetically affected.

The points of special interest in the case are the slight tenderness in the eye primarily affected, the rapid and complete recovery, and restoration of perfect vision after the injured eye had been removed. The question arises, if in cases of sympathetic ophthalmia neuro-retinitis be the predominant symptom, is not the prognosis more favorable than when cyclitis predominates? Which nerves are principally concerned in the former and which in the latter?

This case is certainly confirmatory of the conclusion arrived at by Knapp (*Archives of Ophthalmology and Otology*, vol. ii, p. 34), that "the diseases which lead to ossific productions are chronic inflammations of the interior coats of the eye called internal ophthalmia by the earlier, irido-choroiditis by modern writers."

MEDICAL PROGRESS.

JEJUNOSTOMY.—At the meeting of the Clinical Society of London, on Nov. 27, MR. C. H. GOLDING-BIRD related the case of a man, æt 46, who had had symptoms of pyloric obstruction for ten months. When admitted into Guy's Hospital, a tumor could be felt at the seat of the pylorus, and the man's general condition was one of extreme emaciation through the inability to retain the food he took, and his voluntary abstaining from eating on account of the pain he suffered. After three weeks treatment, under Dr. Carrington, by drugs and washing the stomach out, he passed into the author's hands, and when all the risks had been explained to the patient, and all methods of palliation had failed to improve his condition, arrangements were made to explore the diseased parts, and remove them if expedient. He therefore, on October 25, 1885, cut down on the pylorus with a view to performing pylorectomy, following the lines laid down by Billroth; but, finding the tumor adherent to the liver, determined to go no further in the radical operation, but to convert it at once into a palliative one of opening the jejunum, in other words, of performing jejunostomy. Having seized the jejunum two inches from the duodenum, it was held upon a pair of tongue forceps, whilst the wound in the parietes was united; to the lower or right end of this wound was the jejunum now stitched by interrupted sutures. The patient suffered in no way as the result of the operation. He was fed partly by rectum, partly by the mouth, until the third day, when the bowel was opened and food administered solely through the fistula. It was observed that, as long as the meal amounted to a pint, or nearly so, the patient each time he was fed had a severe attack of indigestion, but that this ceased when the meal did not exceed ten ounces. On this the author founded the suggestion that some cases of indigestion were due to the pylorus allowing too free passage of chyme, rather than to anything wrong with the gastric or pancreatic secretions. Everything went on perfectly well till the ninth day, the patient putting on flesh, but on that day, through an error in feeding him, some food passed into the peritoneum, and he died in twelve hours. The post-mortem showed such adhesion to, and infiltration of, the liver, from the cancerous pylorus, that pylorectomy could not have been performed. Except the narrow track made by the probe, and along which the food passed into the peritoneum, the adhesions of the bowel and parietes were perfect. The author than reviewed the operation of pylorectomy, speaking in favor of it in suitable cases, and the operation of gastro-duodenostomy, as performed by Wölfler, and pointed out the great drawback, in this operation, that the stomach was not relieved of its physiological duties at all, the pylorus not being required to act. For the operation of jejunostomy, as he termed the one that he detailed, he claimed that, whilst it possessed the same disadvantage as gastrostomy, in that the patient had to be fed through the fistula, it was otherwise the best palliative operation for pyloric cancer, inviting less risk than gastro-enterostomy, and requiring less interference in its performance with the other viscera. By duodenal digestion, he also pointed out, full nourishment could be assured, and there was for physical reasons less chance of regurgitation of food than after gastrostomy; regurgitation in these cases being a serious drawback to that operation in œsophageal constriction.—*Medical Times and Gazette*, December 5, 1885.

CONTRIBUTION TO THE STUDY OF MORPHIOMANIA.—DR. MARANDON DE MONTYEL summarizes the results of his investigations of the production of morphiomania as follows:

I. Morphiomania has its origin either in a demand for intellectual excitation and psychical pleasure or in the acquired habit.

II. Injections of morphia have as a result a double action: a benign and a special action upon the nervous system by which its natural function becomes impossible after a certain term without the assistance of the poison. These two effects are separate and distinct from each other; the second is manifested when the first is no longer exhibited. There are, then, two kinds of morphiomania; the one resulting in temporary good effect, the other a vital necessity; and after a variable period the cases of the first order pass over into the second.

III. This double action of morphia upon the nervous system renders it an extremely dangerous medicament, and it therefore should not be prescribed hypodermically except in cases of absolute necessity.

IV. It is also extremely dangerous to combat morphiomania by the substitution of alcoholics, inasmuch as chronic alcoholic insanity may result therefrom.

V. Morphiomania may always be treated by abrupt withdrawal of the drug, except in conditions when such methods are contraindicated by the vital forces of the patient or concomitant pathological phenomena. The method should also be abandoned if reactionary collapse result.

VI. In the treatment of morphiomania by gradual suppression of the drug, it appears advantageous to combine with the progressive diminution of the dose the recoil of momentum by fusing two injections into one.

VII. The medico-legal questions pertaining to morphiomania are certainly based more upon extra-judicial than upon judicial clinical observation.

VIII. Observation shows that a morphiomaniac may have great energy of will while the poison has not yet determined any disorder of intellect. There is here a serious proof of what has already been said, that responsibility only ceases with the period of psycho-physical marasmus.

IX. Relative to the responsibility of morphiomaniacs who commit crimes or offenses to satisfy their passion, it is, perhaps, necessary to distinguish whether they have yielded to the simple appetite for a pleasant effect or to a physical necessity dependent upon the instinct of self-preservation. A conclusion of irresponsibility in the latter case seems justified.

X. In the exact appreciation of the intellectual troubles caused by the abuse of the hypodermatic

injection of morphia, it is important correctly to appreciate the existence of predisposition to insanity, and the delirium produced concurrently by the absorption of other substances, such as alcohol and belladonna.

XI. It is necessary to retard the continual progress of morphiomania by disseminating general information in the upper ranks of society concerning the deplorable and certain evil effects following the use of the drug, and to exercise an active surveillance over pharmacists, and impose special penalties upon those who dispense morphia without a physician's prescription.—*L'Encéphale*, May and June, 1885; *Amer. Journ. of the Med. Sciences*, Oct., 1885.

BACTERIOTHERAPY.—In a recent number (*British Medical Journal*, August 29, 1885), we gave a short account of Professor Cantani's experiment in "bacteriotherapy," in which a phthisical patient was subjected to inhalations of bacterium termo. The result was that bacillus tuberculosis disappeared, and the condition of the patient was wonderfully improved. Dr. Salama, of Pisa, reports another case of the same kind. In a case of phthisis, with a cavity in the apex of the left lung, and various patches of consolidation, Koch's bacillus disappeared within about a fortnight after the inhalations of the bacterium termo were commenced, all the other symptoms improving at the same time. Dr. Maffucci, Professor of Pathological Anatomy at Pisa, who verified the diagnosis, prepared the bacterium-culture. A few drops of spring-water were added to a sterilized solution of gelatine in meat broth with peptone. After a day or two, colonies of various micro-organisms made their appearance, and amongst them was the bacterium termo. Under the microscope, a sterilized platinum needle was dipped into this, and then introduced into another portion of the gelatine preparation. After two days, this was found to be a pure culture of the bacterium termo. The contents of one test-tube prepared in this way served for one day's inhalations, being mixed with a meat-broth made from 150 grammes of beef to 200 grammes of water, and left for eight or ten hours, according to temperature. If left too long, the putrefaction became insupportable to the patient. Broth so prepared was given by Siegel's spray-producer every day in divided doses. Sufficient time has not yet elapsed to show whether the improvement was permanent. It is not quite certain that the bacterium was the sole agent of amelioration here. It is possible that the meat-broth may not have been without its effect; and it is just within the range of supposition thar the bacterium has a psychical influence on physician as well as on patient, not less important than its alleged bacillicide properties.—*Brit. Med. Journ.*, NOV. 28, 1885.

A NEW ANTISEPTIC.—Those of us who use iodoform in the consulting-room must frequently have been seriously annoyed by its powerful and persistent smell. Drs. Silber and Ciammician, of Rome, have found an admirable substitute which has all the advantages of iodoform without its odor or, it is said, its poisonous properties. This substance is iodol, which occurs as a dark powder with a slight scent, reminding one of thymol. It is very slightly soluble, and is best used either in substance or suspended in glycerine, or made into an ointment with vaseline. A lotion can also be made by dissolving 1 gramme of iodol in 16 grammes of alcohol and adding 34 grammes of glycerine. Most brilliant results have been obtained by the use of the substance itself on chancres and syphilitic adenitis. In simple indolent ulcers, too, the use of the iodol lotion has been very beneficial. A spot of lupus on the leg was treated by injections of iodol solution into the surrounding subcutaneous tissue with the result of preventing the disease from spreading. Iodol has also proved useful in fungating joint diseases. Over 200 observations have been made, and neither erysipelas nor a diphtheritic condition of wounds has occurred.—*Wiener medicinisches Blatt.*—*Medical Times and Gazette*, December 5, 1885.

THE APPLICATION OF NAPHTHOL TO SOME FORMS OF CUTANEOUS DISEASE.—P. SOMBRET (*Thèse de Paris*) gives the following *résumé* of the advantages possessed by naphthol in the treatment of some forms of skin disease.

1. The preparations are odorless, and stain neither the skin nor clothing.

2. In the use of naphthol, with the precautions advised by Kaposi, there are observed neither forms of intoxication (albuminuria, coloration of the urine) nor active inflammation of the skin.

3. In scabies, naphthol is an excellent parasiticide and exercises a very beneficial effect upon the eruption due to the disease.

4. In pediculosis the remedy is efficacious, and its use is free from danger and inconvenience.

5. In psoriasis no satisfactory effect has been observed.

6. In prurigo (of Hebra) naphthol causes the itching to disappear rapidly, and has beneficial effect upon the eruption. It, nevertheless, does not possess a curative power in this disease greater than that possessed by other remedies.—*Revue des Sciences Médicales*, July, 1885; *Amer. Journ. of the Med. Sciences*, Oct., 1885.

PELLETIERINE IN OCULA-MOTOR PARALYSIS.—The Paris correspondent of the *British Medical Journal* writes that MR. GALEZOWSKI recently read a paper before the Académie de Médecine on the action of pelletierine on the motor nerves of the eye. His researches are based on the ocular disturbance which occurs in subjects who absorb pelletierine; they are affected with diplopia. The observance of this fact induced M. Galezowski to prescribe pelletierine when there is paralysis of the third and sixth pairs. Iodide of potassium and blisters have failed where pelletierine has cured; the preparation used is syrup of pelletierine, 1 gramme per 120 parts of syrup. From three to six doses were administered. Unfortunately, this substance is excessively dear. M. Galezowski hopes to meet this difficulty by administering pelletierine in subcutaneous injections.

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THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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THE STUDY OF MEDICINE AS A MEANS OF EDUCATION.

Such is the title of a paper read before the American Academy of Medicine, at its recent meeting in New York City, by DR. J. LOWRY SIBBETT, of Carlisle, Pa. The paper is not intended, as might at first be supposed, to show that the study of medicine is a means of education; but to show that the preliminary education (or the academic) for the study of medicine should be more thorough, and that this should be insisted upon by the medical colleges.

It will be remembered that one of the requirements for membership in the American Academy of Medicine is that the applicant must be a graduate of an academic college; and unless we have misread the article now under consideration, this idea runs through it as an undercurrent, though the author does not express the view that graduates of academic colleges should be admitted to the medical college classes on the face of their diplomas in arts. Nevertheless, it is directly implied that a man is unfitted for the study of medicine until he has completed a course (obtained a liberal education) in an academic college. Completing a course in an academic college means only that the student has attended recitations or lectures on certain prescribed studies; he has, to quote our author, "studied mathematics, languages, rhetoric logic, mental and moral philosophy, and as much chemistry, geology and astronomy as is usually taught in respectable classical schools." We may assume, says our author, that the medical students from these schools "have spent five or six years in these several departments of useful study; that they have the mental discipline resulting from mathematical demonstrations repeated a thousand times, so important for the development of the reasoning faculties; that they have enjoyed the advantages of analysis and synthesis in the study of languages. . . To all such we would say that they have laid a solid foundation upon which to add professional studies. Their education has been in all directions; not merely one class of mental faculties, but all have been exercised and disciplined."

It will be observed that nothing is said in the above quotations as to the value of the sciences in training the mind, or mental faculties; which seems to imply that the sciences (three of which are mentioned) are to be studied solely for a general knowledge of certain facts, and because they are included in the college curriculum. It should be remembered that we are now considering the academic "education" as preliminary to the study of medicine particularly. Our author speaks of the importance of the study of mathematics for the development of the reasoning faculties, of the study of languages for analysis and synthesis, but does not even allude to the great value of the study of chemistry or geology for these purposes. It must, however, be unhesitatingly asserted, that the study of chemistry (a branch, be it remembered, of surpassing importance for the understanding of medicine) *as it should be taught*, far surpasses the study of mathematics for training the reasoning faculties. The modern mathematics is of but little value for this purpose, as was pointed out by Whewell more than forty years ago. While mathematics is a purely deductive science, it is not yet the embodiment of pure deduction. There is no appeal to observation, fact or induction. It does not teach the student to, or *how to* observe, generalize, classify, or define by the examination of particular things; and when statements and arguments are confused and perplexed by verbiage, contortions, inversions and ellipses, its principles are absolutely useless. In regard to the peculiar advantages of languages for elevating the qualities of synthesis and analysis it may be asserted that they do not exist. Language should be studied chiefly as the tool of thought. "The scientific student must no longer be handicapped by a linguistic (I will not say literary) burden" (Huxley). The languages now required by a scientific man are English, French, German, and to some and an increasing extent, Italian. He does not need them except as tools, to find out what is going on in the scientific world. But in order to learn them for this purpose he need not lumber up his memory with a mass of grammatical detail. It should be distinctly understood that the literary man may use the results of science as so much literary material without trou-

bling himself as to the methods by which they are arrived at; and that the converse is almost literally true of the scientific man as regards languages.

That it should still be held, almost at the close of this century, when the natural sciences are the great powers of the world, and, after religion, the greatest power of modern civilization; when all the ancient and classical learning has failed to stay one human pain or to lift one ounce of human suffering, that the man who has not had the usual routine academic education is unfit for the study of medicine, is beyond conception. The whole success of the physician must depend on the skill with which he can utilize the experimental sciences. Should the millenial day come when everyone who elects to study medicine must go through a thorough preliminary course of training for it, it is to the experimental sciences that we must look for the foundation upon which to build a thoroughly competent physician. And then will come the time when the original investigator will be a usual product, not an accident. If the physician is to be scientific, he must have a scientific foundation; but as the case now stands, very few of the graduates of the strictly academic (and most of our academic schools are "classical" schools) of this country are properly prepared for the study of medicine. And while we would not decry these schools, it must be said that the instruction given in the greater number of them is not that which fits the student for the study of science, or of a profession founded on science. "An instructor in natural science has very much the same difficulty in training classical scholars to observe that a dancing master would have in teaching Chinese girls to waltz." (Cooke).

Medicine, which a century or so ago was ruled by authority and traditions, and might then have been classed with the literary professions, has now come to rest on a purely scientific basis. This truth is not altered by the fact that medicine is not yet a pure or exact science. And inasmuch as a distinction must be made between literary and scientific professions, an equal distinction should be made in the systems of education that lead up to these professions. It is the object of the physician to unravel the mysteries of the healthy and diseased human frame, and to direct and aid the forces of nature for the cure and prevention of disease; and all the logic of the schoolmen, the ability to analyze and read all the Greek and Latin that has ever been written, and the facile demonstration of an epicycloidal curve or of the square described on the hypothenuse of a right-angle triangle, are of infinitely small value for these ends as compared with a thorough knowledge of chemistry alone. As there is a difference of subject-matter between a scientific and literary profession, there should and must necessarily be a difference in methods, spirit and aim of study.

It has been held that Greek scholarship is impossible for the student who begins that study in college; and still less can we expect scientific scholarship when the study of science is first begun and too soon ended in the medical college. A change from classical to scientific studies at the age of 18 or 20 has as many disadvantages as changing a profession at 50. However desirable it might be for a man to be both a classical and scientific scholar, he is the rare exception who can attain to this double culture; and as we can neither change the mental capacity nor alter the span of human life, we must be content to strive after that education, that culture, which will make us the most useful citizens. If the school-men contend that the classical scholar is more brilliant and ornamental, so be it. So is the diamond more brilliant than coal, though both are carbon—as are classicists and scientists human. And to attempt to make a scientific man in a classical retort is as absurd as to try to make coal a jewel by setting it in gold, or to run a steam engine by throwing diamonds into the furnace. In a word, scientific culture is a suitable basis for a liberal education, and it will be recognized as such when the school-men cease to dream in the moonlight of the past, and awake to the living present.

A further and very important point is, that the recasting of the present academic course of education so as to include more science, and science properly taught, would tend to show the student his fitness for any particular profession much more clearly; and in this way it is extremely probable that very many who are not fitted by nature, inclination or education for the study of medicine would pursue other callings. It is time that a halt was called to the absurd idea that, while every man may not be fitted for the study of a scientific profession, every one is adapted to the mould of the academic or classical college course. Teachers of the experimental sciences declare that the students of the academic colleges form tread-mill habits which unfit them for the immediate study of science. Prof. Cooke, probably the best teacher of chemistry in this country, has written forcibly on this subject, and says: "After that command of language which the necessities of civilized life imperatively require, there is no acquisition which we can give our children that will exert so important an influence on their material welfare as a knowledge of the laws of nature, under which they

must live and to which they must conform;" and he and all other teachers of science declare that this knowledge cannot be gained by recitations from books on "familiar science." There should be a course of preliminary study for the medical profession, and the medical colleges should require preliminary examinations; but the fact that a student may pass high in Greek, Latin, mathematics, logic, mental and moral philosophy, etc., does not form the least indication that he is fit to study medicine. Medicine is not a means of education, but an end requiring a certain line of education.

FORCIBLE INJECTIONS IN INTESTINAL OBSTRUCTION.

In the *American Journal of the Medical Sciences*, for January, 1886, DR. H. ILLOWAY, of Cincinnati, reports four cases of intestinal obstruction treated by the forcible injection of water, with three recoveries and one death. The injections were made with a powerful force-pump, and repeated two, three or more times, as necessary. The post-mortem examination in the fatal case showed that a knuckle of the ileum had passed through a slit in the omentum and bent upon itself, and the intestinal structures about the incarcerated portion were somewhat softened, (death having taken place in a little more than a week after the symptoms set in.)

Dr. Illoway concludes from these cases that: 1. Enemata are superior to every other method of treatment. *a*. In the rapidity in which the cases are relieved. *b*. And in clearly indicating whether a surgical operation will be required. 2. They are entirely safe and free from all danger, and in no way prejudice the case should a surgical operation become necessary. It is due to Dr. Illoway to say that an operation was advised in the fatal case two days before death, and was refused. But for the length of time at which death ensued in this case, and the small amount of softening of the incarcerated portion of the intestine at this late date, we should be inclined to think that there may be an element of danger in forcible enemata in cases of some days' standing; namely, rupture of softened intestinal walls by the force of the injection and the pressure of the fluid. This fatal case must either be exceptional in regard to the degree of softening found, or we must think that the danger mentioned is comparatively slight until a longer time has elapsed. Of the two alternatives it must seem that the first should be held. It should be remembered, also, that the last injections were made on Tuesday, and that death took place on Friday; a sufficient time having elapsed for marked pathological alterations to take place. And it is entirely possible that had the forcible injections been made on Friday or the day before, the intestinal wall might have been ruptured.

However this may be, Dr. Illoway shows very conclusively that forcible injections are of great utility in promptly relieving some cases at least of one of the most unsatisfactory conditions with which the physician or surgeon has to deal. In the three favorably terminating cases the relief was permanent and almost immediate. In one of his cases an ordinary Davidson syringe had been tried without effect before the force-pump was used; from which it would seem that sufficient force cannot be obtained from an ordinary instrument. It is scarcely necessary to say that laparotomy should be performed if the force-pump proves ineffectual, with as little delay as possible. It will be remembered that in an editorial in THE JOURNAL of September 26, 1885, the treatment of intestinal obstruction was carefully discussed, and the following sentence quoted from the paper of Mr. Treves, read before the British Medical Association, at Cardiff: After twelve hours of treatment of acute intussusception with opium or belladonna and rest, it will be expedient to attempt reduction by means of insufflation or forcible enemata. This should be done in the first twenty-four hours, if possible, in order that laparotomy may be performed early.

COLLECTIVE INVESTIGATION OF DISEASE.

We have recently received the "Proposed Question-paper No. 7," issued by the International Committee for Collective Investigation, which completes the series intended for collecting the facts concerning the geographical distribution and etiology of rickets, acute rheumatism, chorea, cancer, and urinary calculus. The memorandum and questions for the four first named of these diseases were very neatly arranged and printed for distribution in this country under the personal supervision of Dr. A. Jacobi, of New York, one of the American Members of the Committee, several months since; and it is earnestly desired that all who have received copies, or who may receive them soon, will carefully make the proper entry of all cases coming under their observation during the years 1885–6, and return them to either one of the American Members of the Committee early in January, 1887. The return at that time is necessary in order that the facts they contain may be properly collated for use in connection with those gathered in Europe, at the International Congress to be held in Washington in September of that year.

NINTH INTERNATIONAL MEDICAL CONGRESS —PROGRESS OF ORGANIZATION.

Two or three of our exchanges still repeat the assertion that no material progress has yet been made in the Organization of the Congress. This is far from being true. On the contrary, the Preliminary Organization is at this time nearly complete. *First*, notwithstanding all that has been said about *declinations*, a large number of those appointed and published by the Committee on Organization, as first constituted, still hold their places, and for every one who has declined two equally well qualified have cheerfully accepted positions. *Second*, the only important vacancies now existing are in the office of President of the Sections of Physiology, Pathology, and Gynecology, the filling of which has been delayed by the Executive Committee for reasons we have stated in previous issues of this JOURNAL.

Not only is the *personnel* of the Organization thus nearly complete, but the proper officers are actively engaged in arranging the work for each Section, and the Executive Committee will doubtless be ready to issue a supplementary circular containing a full programme, early in May next. Already notices of contributions for several of the Sections have been received from prominent members of the profession in Great Britain, and indications favorable for a full European attendance are daily increasing.

CHRONIC ULCERS.—DR. W. P. HOWE, of Charleston, Mo., writes to us saying, "that *lime* procured from barrels that have stood open for some time, sprinkled upon chronic ulcers will cure them when everything else, usually prescribed, fails. . . . Cleanse the ulcer with warm water and soap once every two days and fill the sore with lime; no more bad odor, no more pain, and a remedy so cheap that it is within the reach of everyone.

THE CHICAGO MEDICAL JOURNAL AND EXAMINER, for January, 1886, contains a connected and fair history of the origin and progress of the work for effecting the Preliminary Organization of the Ninth International Medical Congress. If any desire such a connected history they can obtain it by applying to the Editor of that journal, 242 Wabash Avenue.

THE DEATH OF DR. J. ORNE GREENE, of Lowell, Mass., is announced as having taken place on December 23. Dr. Green was born in Malden, Mass., on May 14, 1799, and was therefore in his eighty-seventh year. He was graduated from the Medical Department of Harvard in 1822.

SOCIETY PROCEEDINGS.

AMERICAN PUBLIC HEALTH ASSOCIATION.

Thirteenth Annual Meeting, held at Washington, D. C., December 8, 9 and 10, 1885.

(*Continued from page 24.*)

THURSDAY, DECEMBER 10—THIRD DAY.

EVENING SESSION.

The Association was called to order at eight o'clock by the PRESIDENT, DR. JAMES S. REEVES.

DR. J. M. TONER, of Washington, stated that not having been present during the discussion of Dr. Chancellor's paper, he wished to say in regard to the prevalence of pulmonary diseases in Washington, that it was due in a great measure to the large number of colored people in the District who, on account of their careless mode of living, without sufficient shelter and proper food, are predisposed to consumption; and further, that many of the deaths occurring here do not belong really to our population, as they occur among people already fatally affected, and only stopping here on their way to a more southern and genial climate.

A special committee on

DISINFECTION OF RAGS,

to consider the resolutions offered on that subject, was appointed as follows: Drs. J. Howard Taylor, of Philadelphia; A. N. Bell, of New York; Henry B. Baker, of Michigan; C. W. Chancellor, of Maryland; and H. B. Horebeck, of South Carolina.

THE LOMB PRIZE ESSAYS.

DR. C. W. CHANCELLOR, Chairman of the Committee on the Lomb Prize Essays, reported that the Committee had carefully examined the thirty-six essays on "Healthy Homes and Foods for the Working Classes," and had not found that any of them fulfilled the requirements. In view of the fact that the essay bearing the motto "He who secures a healthy home and healthy food for himself and family does not live in vain" is one of great merit, the Committee had decided to award to it the second prize.

The Secretary was then directed by the President to open the sealed envelope corresponding to the motto, and it was found that the author was Prof. Victor C. Vaughan, of Ann Arbor, Michigan.

HON. ERASTUS BROOKS, Chairman of the special Committee to award the prizes for the essays on

THE SANITARY CONDITIONS AND NECESSITIES OF SCHOOL HOUSES AND SCHOOL LIFE,

read the report of the Committee: The Committee appointed by the American Public Health Association on "The Sanitary Conditions and Necessities of School Houses and School Life," and to whom the Secretary has forwarded twenty papers, covering from twenty-two to one hundred and sixty-five pages, report:

1. That they have given to the papers the attention due to the importance of the subjects discussed. All of them present subjects belonging to the proper

care and character of common and private schools —to building, their management indoors and out of doors, and especially to school hygiene. Everything relating to physical education and general health is presented, and under these and other subdivisions of subjects all that relate to scholars at school and scholars at their homes, to every form of possible school disease, to proper hours or times of study, to school age, to light, and diet and clothing, to heat and cold, sleep and needed recreation, to proper kinds and times and places of exercise, of general eye-sight and all diseases of the eyes, to baths, bathing, and all distempers and maladies to which children at school are exposed, to school architecture, accompanied with valuable illustrations of the best styles of building, to school grounds as to places, grading, and finish with reference to the plans known as the system or plans of Mr. T. M. Clark, of Boston, the Sargent system of Cambridge, the Briggs plans of Connecticut, the Swedish system of Lying, and almost every system founded upon knowledge of the human body. Bodily punishment is opposed in all the papers, except in very rare or extreme cases, and one reason given is that lethargy, idleness, and disobedience may come, and do often come, from evils in the schools where severe rules are the near or remote causes of the evils complained of. So likewise, school competitions are censured as exciting the nervous system too much, and often arousing jealousies and ambitions which result in no practical good to those who are pitted against each other. School exhibitions in the heat of summer are also condemned. Where competitions and exhibitions are desirable, the exhibitions and recitations should not be in public. No one school, it is held, should exceed 600 pupils; and where, as in the schools of New York City, out of 2,300 very young pupils examined only 122 had at best perfect eye-sight, it becomes too apparent that the crowded condition of schools is largely responsible for the increasing defective eye-sight in young persons. All the more is this apparent and suggestive when it is known that myopia becomes a progressive disease. Where careful examinations have been made, it is shown that, starting from nothing, from 60 to 70 per cent. of the scholars have, in one form or another, impaired eye-sight; and that from 10 to 25 and even 30 per cent. in some schools have impaired hearing.

2. In reading these several essays we are impressed with the fact that those who most need the information given in them are from prejudices, habits of life, ignorance and other reasons, the least likely to be benefited by the facts and statements they contain. But this truth only shows the constant necessity of this form of education, and the duty of those who are blessed with means, experience and knowledge of improving every opportunity to impart to others, and in every practical manner, the result of their own study and investigation. In this spirit Mr. Henry Lomb, of Rochester, in the spirit of the largest generosity, has made the American Public Health Association the vehicle or instrument of his several benefactions for the health, comfort and instruction of the people of the State and Nation. The act is worthy of all honor, and the example deserves the thanks of the people and the congratulations of wise and good citizens of the whole country.

3. If children are forced to go to school by the State, the State owes them instruction in what belongs to the mind; and if this is admitted, physiology and anatomy ought to be taught in all schools, as the recent statute requires in the State of New York. In a very important sense the body and mind are one, and especially are they a unit in about all that relates to health. Physical and mental education should receive equal attention.

4. The limited time due to any one study, and the proper directions of all studies, according to age and bodily or mental conditions, present subjects apart from overwork in the school-room. The suspension or continuance of studies in the interest of education also presents this subject wholly apart from what is called too much study or overwork in the school-room.

5. Among the specialties named and urged in some of these papers are the appointment of regular medical examinations both of teachers and scholars, the examiners to be qualified physicians or inspectors, and these persons to know that the teachers have in all respects intellectual fitness for their tasks as teachers. Such appointments would direct and control all that belongs to school hygiene, all that belongs to vision, the source of so many evils to pupils under the present neglected systems, of what belongs to light, air, bodily positions, time and place of lessons, and of what is due from teachers in regard to physical and scientific development both of mind and body. These medical examinations, it is believed, would result in the double good of saving life and promoting health, of separating those afflicted with contagious and other diseases from those who are free from them. It is urged that for these reasons there should be some annex for the feeble in body and mind. If the State is ready to enforce the separation of dumb animals—the healthy from the diseased—it is urged that the State should be at least quite as ready to separate school children whose presence one with another endangers the health of the pupil, of the family, and of the whole community. If, in a sentence, a quarantine is required for the cattle and hogs of the country, a like quarantine should be provided for the little ones who already are the children of the State, and if alive hereafter to be the fathers and mothers of the country.

6. It is also urged that teachers should be licensed to teach and their qualities proved before they enter upon their work. At present politics, prejudice, sects in religion and prejudices in party, with ignorant men to select and decide in the choice of teachers, too often and most often are the motives and purposes of the successful choice. If anywhere in the public service an intelligent and honest civil service is needed, it is in the selection of teachers in our common schools. If discretion, wisdom and righteousness are required upon the Bench, at the bar, in the general business of the State for the people at large, or in the teachers from desks dedicated to God, these qualities are surely none the less re-

quired in the great work of teaching the millions of children in a country whose population ere long, judging from the past and present, will number nearly one hundred millions of people.

7. One of the papers, chiefly for reasons of freedom in fitting places of recreation, favors the co-education of the sexes, between the ages of beginning study (which varies from 5 to 8 years) and the age of 14, excepting for children under 5 and in attendance upon kindergarten schools, where the hands and the eyes are made useful almost by observation alone.

The study of music, especially where the fingers are used, is urged for strengthening the hands, as the voice may be used for strengthening the lungs. As a system, also, the Swedish, which is denominated educational, æsthetic, military and medical, is the oldest, and with many the most approved, for the reason that under one of these heads is taught the best kind of free exercise, under the second is taught what belongs to the expression of ideas and sentiments by means of positions and movements and what may be called grace of manner. The use of the sword, foil and bayonet belong to the third classification, and the law of Congress of 1862 requires instruction in all these weapons, and in all that belongs to early and practical lessons in military service. Under the fourth, or medical head, instruction is enforced in what belongs to the treatment and cure of chronic diseases and deformities, through the use or agency of free movements, with or without assistance, resistance by special apparatus, or by manipulation. These four exercises are intended for the harmonious development of the body, and secure the end desired. While this system is generally approved, it is proper to say that it is also criticised and opposed as wanting in spirit and energy from the absence of apparatus and the absence of motive to complete a definite object.

8. As a substitute for the long time devoted to study in school, it is suggested that the full school hours be divided between books and work, and some kind of useful mechanical work, if possible. In the general order of proper school education we suggest:

First, A sanitary education for the body and the mind.

Secondly, Mechanical instruction in the interest both of mind and body.

Thirdly, And in this order, appropriate school studies from books.

While this is reversing the common methods of school education the beginning, at least, here suggested, is in the right direction, and should be insisted upon by the State and by all in authority having charge of our public school system. Your Committee, in view of the important subjects presented to them, venture to suggest and to recommend these conclusions:

First. In regard to teachers, and in the interest of the health of children entrusted to their care, that other knowledge than teaching the ordinary lessons of the school room is desirable.

Secondly. That the highest object of life, next to moral conduct, is the health of the old and the young, and that the chances of health in middle life and old age are almost impossible where a wise sanitary foundation has not been established in the period of time usually devoted to school life.

Thirdly. That the examination of the large number of papers submitted to the Committee proves the necessity of a much greater interest in the sanitary condition of school houses, and of a much larger common interest in school life. In the use of the eyes from various causes, fully enumerated in papers before the Committee, it is shown that the disease known as myopia has increased from nothing to 50, 60 and 70 per cent., and in parts of Germany to 79 per cent. That schools very often are but so many factors of near-sightedness, that parents and their homes share in the responsibility and cause of this great grievance in common with teachers and school houses. This is also true, though not to the same extent, in the bad use of the ears, in defective light, in foul air and bad ventilation. These great defects in school rooms and homes, in teachers and pupils, are all the time progressive in parents, homes, teachers, and pupils, from class to class, and from year to year.

Fourthly. That in not knowing what was necessary to secure the health of the present generation, our honored ancestors, in a large sense, became responsible for the ignorance, deficiencies and diseases of the present, and the present generation will in turn, by persistent neglect and ignorance, become responsible for like consequences in the future. We all well enough know and understand what inheritance means when it results in personal good fortune or family estates, and we ought to know what inheritance means when the effect is to impart vice, disease and death upon those who are to succeed us. Fortunately for the State and country, the American Public Health Association is established to teach, among other lessons, the necessity and value of hygiene for the young as well as the old, especially in all school life, as well as among adults in the homes and workshops of the country.

The Committee did not consider any one of the papers presented as worthy of the first prize. The second was awarded to Dr. F. Lincoln, of Boston.

(*To be concluded.*)

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, December 3d, 1885.

THE PRESIDENT, B. F. BAER, M.D., IN THE CHAIR.

DR. ELLIOTT RICHARDSON read a paper on

SOME CAUSES OF TARDY FIRST STAGES OF LABOR, AND THEIR TREATMENT.

(See p. 32.)

DR. PARVIN remarked that the subject of Dr. Richardson's paper was one of great practical importance, and his presentation of it has been very interesting. Coming to its ultimate analysis, a case of labor, tedious in either the first or in the second stage shows a want of proper relation between power and resistance; the former for an unusually long time is unable to overcome the latter. Manifestly, if this be

so, we have naturally suggested to us two plans of treatment: either increase the power or lessen the resistance. These principles are plain, but the selection and the application often present serious difficulties. Severe suffering in the first stage of labor certainly should be relieved, for this suffering exhausts, and it does not follow that the power of a pain is to be measured by the intensity of suffering it produces, and therefore "painful" pains are an undoubted evil. As to the means for their relief when they are associated, as they usually are, with very slow dilatation, many would prefer chloral injected into the rectum to morphia internally, or anæsthetic inhalation.

In regard to the process of dilatation of the os, it is possible Dr. Richardson has attached too much importance to the bag of waters as a dilating means; that is the mere passive process, but there is an active process—that by which the circular fibres of the uterus are, by the action of the longitudinal fibres, retracted over the bag of waters, or the presenting part, if the former be ruptured; it is not so much descent of the presenting part which occurs as it is the ascent of the expanded cervix, for in primaparæ, at least, the head is usually, at the beginning of labor, in the pelvic cavity, and it can go no farther until the dilated os has passed more or less completely above it. It may be that resistance being lessened by chloral, or by opium, the power is sufficient to overcome it, but if it be not, probably the continuous current of electricity will be the most efficient means to increase the uterine force. In this connection I may refer to the statements of Bayer, in his recent elaborate monograph entitled *Morphologie der Gebürmutter*. In many cases of labor where delay occurs in the first stage, it is not the os uteri that is at fault; the obstacle is higher up, and according to Bayer, the anatomical condition of this "*Stricturirung*" is the deficient unfolding of the cervix. In such condition there may be a spastic ring-like stricture or a spastic partial stricture. The first form is especially liable to occur in a narrow pelvis. Bayer recommends warm fomentations, warm vaginal irrigation, a whole bath, eventually narcotics, especially opium by rectal injection, but he strongly insists upon the continuous current as the true natural method of treatment, on the one hand relieving cramp, and on the other exciting labor, activity thus removing the primary failure, the deficient unfolding of the cervix.

One word as to the occurrence of malarial poisoning in the puerperal woman. I think it comparatively very rare. Certainly this is the conclusion which I must draw from my own experience in private and in hospital practice. In two terms of service at the Philadelphia Hospital I have seen probably forty cases of puerperal septicæmia, and only one case of malarial fever. When one sees a febrile attack in a woman after labor, he is disposed to take the most favorable view of the case and may attribute, at first at least, the disease to malaria when really it is caused by septicæmia, losing precious time, and may be led to give a favorable when a doubtful prognosis should be indicated.

Dr. W. W. Jaggard, of Chicago, upon invitation from the Chair, remarked that morphia hypodermically had been extensively tried in the first stage of labor at Vienna and Paris, and had been discarded, in the former city about six years ago, and in the latter more recently. It had been found to affect the fœtus unfavorably. One-fourth of a grain administered every four hours for some time would be attended with grave elements of prognosis. The possibility of a live fœtus remaining in the uterus forty-five days after the escape of the amniotic fluid he considered more than doubtful. Cysts sometimes form between the amnion and chorion, and the bursting of one of these may give rise to the idea of the escape of the amniotic fluid. Hydrorrhœa gravidarum, a condition dependant on a diseased condition of the decidua, is a more frequent phenomena, and will explain many of the cases of supposed rupture of the amniotic sac.

Dr. W. T. Taylor remarked that the causes of delay in the first stage of labor were numerous. For the relaxation of rigid os he would prefer hydrate of chloral twenty grains; one-eighth of a grain of sulphate of morphia every two hours has a soothing and beneficial effect, giving rest and sleep between the pains. When the edge of the cervix is thin and wiry, the morphia is especially called for. He has experienced delay from dropsy of the amnion. After a delay of six or eight hours he has ruptured the membranes and after the escape of an enormous quantity of fluid, rapid and effectual contractions supervened. Another cause of delay is posterior position of the occiput; if a change of position can be effected labor will progress more rapidly. He has observed premature escape of the liquor amnii from ten days to two weeks before labor, and yet everything went on normally. He has met with one case of malarial poisoning. In the eighth month intense pains were experienced, but there was no effect on the os. He gave five grains of quinine and two grains of potassium bromide, and in a few hours the pain was relieved.

Dr. Longaker stated that according to his experience morphia should be used gradually. In some cases it has caused still-births. In a recent case the first stage of labor had lasted twenty-four hours and the os was but one inch in diameter; four doses of sulphate of morphine, one-fourth of a grain each, were, by mistake of the nurse, given at intervals of fifteen minutes; dilatation and descent of the child quickly followed. As Dr. Parvin has stated, the early stage of labor consists mainly of retraction of the cervix, and early rupture of the membranes as a trouble is overrated. Undeveloped pelves of generally small diameter cause less delay in first labor than in later ones, because in the earlier labors the abdominal muscles are strong to assist the uterine contractions; in later labors, besides having less contractile powers, their laxity allows the body of the child to fall forward, and the vertex presents less favorably at the superior strait.

Dr. Trautmann said that in one case under his care recently he found a well dilated os uteri and a free escape of waters; the pains ceased, ergot was

given without any effect, and as the forceps were strenuously objected to he was obliged to do nothing. After an interval of four weeks labor came on naturally and a living child was delivered. The unaccountable facts in this case are the widely dilated os, the escape of the waters, and a living child four weeks later.

DR. W. S. STEWART said that sodium bromide is good to prevent premature labor; five drachms may be divided into ten doses and one given every three hours. He has observed in one patient an apparent rupture of the membranes at five months, the fluid coming away with a constant drip; later the flow was greatest at night; this condition lasted for six weeks, when it terminated in premature labor; the fœtus was living. The fluid which came away was examined and seemed to be amniotic. He also has observed retardation of labor from falling forward of the fœtus in relaxed abdomen; when such a patient is placed on her back labor goes on rapidly.

DR. CHAS. M. WILSON remarked that hydrorrhœa gravidavum is more frequent than is supposed, and is mistaken for premature discharge of the amniotic fluid. Rigidity of the os uteri is most quickly relieved by inhalations of chloroform. He has found its action more satisfactory than that of chloral and sodium bromide or ether, and safer than morphia. Postural treatment of early stages of labor is of the greatest importance; he would place the patient on the floor on her knees or haunches, holding by the back of a chair or post is often useful, as it assists in fixing the respiratory muscles. He has not had good results from the local use of belladonna.

DR. KEATING spoke of some experiments he had been making. The patient was first to practice Dr. Bonwill's method of inducing partial anæsthesia by rapid long breathing for a time, and then to hold the breath as long as possible. This method was found to bring on rapid and efficient pains in the multiparæ with pendulous abdomen.

DR. BAER remarked that take it all in all, morphia hypodermically is the most valuable remedy we possess for the relief of pain and rigidity of the cervix during the first stage of labor. Of course it must be used within proper limits.

DR. RICHARDSON, in closing the discussion, said that his paper was not intended to be comprehensive. His use of morphia extended only to doses of one-sixth of a grain every four hours, by the mouth, and not hypodermically. In the patient whose history he had given, intermittent fever was developed later on, and he has not the slightest doubt of malarial poisoning being the cause of the untoward symptoms during and after labor; there was no fever, no rise of temperature, and therefore septicæmia is excluded. There can be no question as to the retraction of the cervix when the head is already in the pelvis, but when the head fits tightly into the superior strait and the cervix is jammed by it, the pressure upon the upper sac is greater than upon the lower, cut off from it by the head. Chloroform is more efficient than any other agent he had used, but it was not always to be preferred.

(To be concluded.)

CHICAGO GYNAECOLOGICAL SOCIETY.

Stated Meeting, Friday Evening, Nov. 27, 1885.

THE PRESIDENT, DANIEL T. NELSON, M.D., IN THE CHAIR.

DR. JOHN BARTLETT read a paper entitled

REMARKS ON THE TOXIC PROPERTIES OF SASSAFRAS.

Sassafras was discovered in Florida by the Spaniards and named by the French in 1562. It was used by them in association with other native herbs as a remedy for malarial diseases. Though occasionally prescribed in combination in rheumatism and syphilis, and regarded as possessing diuretic, diaphoretic and tonic properties, it has fallen into disuse. So that by referring to such books as were within my reach, namely, Motherby, 1785, Parr, 1809, Eberle, Trousseau, Mitchell, Warring, Stillé, Ringer, Bartholow, Phillips, Wood, Fluckeger, Farquharson, Brunton, Wormly and Blyth, and the U. S. Dispensatory, National Dispensatory, Christison's and King's Dispensatories, I can find no mention of the possession by sassafras of any decided therapeutical or noxious power.

More than twenty years ago Dr. Thomas, of Tennessee, stated that sassafras was an antidote to henbane and tobacco; and later, in 1870, Dr. Lyle, of Indiana, declared that he had used the oil of sassafras in a case of stramonium poisoning with the happiest results. Dr. Lyle affirmed that sassafras had power to destroy all insect life, and was an effectual antidote to the venom of the copperhead snake. In 1883 we find that Dr. Hinton claimed that sassafras tea was almost a specific for the rash produced by poison oak. Recently paragraphs have appeared in the medical journals, in which it is stated that sassafras is not the innocent agent that it has been supposed to be, but that in reality it has violent toxic properties. This statement is made upon the authority of Dr. Charles L. Hill, from whose paper read before the 86th session of the Medical and Chirurgical Faculty of the State of Maryland, in April, 1884, the following report is extracted:

"A case of poisoning by the oil of sassafras, that once came within my knowledge, proved that it possesses far more active properties than is generally supposed, and I have been able to demonstrate by experiment on the lower animals that, instead of being a harmless, inert drug, it is a strong nervous sedative, anodyne and soporific, and in over-doses, a dangerous narcotic poison. A policeman, attracted by the sound of a falling window and other suspicious noises proceeding from a gentleman's office, entered the room to ascertain the cause. He found no one present but a boy, who was lying unconscious on the floor. He took him at once to the station-house, where I saw him shortly afterward. The officers had already diagnosed his case as one of opium-poisoning, and were vigorously striving to keep him awake by walking, flogging and such other means as are usually resorted to in these emergencies. His stupor was profound and he no longer made an attempt to walk, but was literally dragged about in their efforts to

revive him. He spoke occasionally, but only to beg them to allow him to sleep. He was in a condition of great relaxation; skin covered with a profuse perspiration; countenance pallid; pulse rapid, but weak and thready. His pupils were *normal*, and there was a strong odor of sassafras in his breath. As quickly as possible an emetic was administered, which produced a copious emesis, redolent with the odor of sassafras, with drops of the undissolved oil floating in the liquid. This was followed by free draughts of warm water, until only a faint odor of sassafras was discoverable. The vomiting relieved him and he was soon restored to consciousness. He felt no discomfort except a sense of weakness and exhaustion, and was soon able to give the following account of himself: His employer having gone home, he was preparing to close up the office, when he espied a bottle of the oil of sassafras which had been left on the desk. Remembering that sassafras had been recommended for the removal of an eruption that disfigured his face, he thought this a good opportunity for giving it a trial, and turning up the bottle—to use his own language—he took two large swallows of its contents. In a few minutes he began to feel very *stiff*, as he expressed it, but proceeded to close up the shutters preparatory to leaving for home. He raised the window for this purpose, but had not strength to hold it in this position, and it dropped from his grasp, and at the same time he fell to the floor unconscious. This suggestive case led me to make numerous experiments on the lower animals with very interesting results. Ten drops of the oil were injected hypodermically under the skin of a mouse. The animal quickly succumbed and died convulsed. By repeated experiments I was able so to regulate the dose as to get the characteristic effects of the drug without causing the speedy death of the mouse. A glass rod was dipped into the oil and held in front of the mouse, and he seized it with his mouth. This was repeated at intervals of a few minutes, until a sufficient quantity was taken to produce the desired effect. The first symptoms observed when a small quantity was thus taken, was a slight convulsive movement, which was repeated at intervals of a few seconds, and agitated the animal's body very much like a severe hiccough. This gradually increased in severity, the movements became more unsteady, the body more arched, and the limbs so stiff that the mouse stood on tiptoe. It was noted that the one idea of escaping from the trap still predominated over all else, as he continued to climb up on the bars of the cage, only to fall on his side or back at each convulsion, until no longer able to rise.

I have repeated these experiments many times with great uniformity of result. Sometimes they would dance about for half an hour, with a peculiar convulsive movement that would jerk the head and front feet from the table. Again they would fall on their side with each convulsion and regain their feet immediately, only to repeat the same movement. With cats and dogs the result was somewhat different. A drachm under the skin of a cat caused such profound insensibility that she was supposed to be dead, and thrown away, but it seems that only one of the reputed nine lives of the animal had been reached, as the next day she turned up none the worse for the experiment. A full-grown dog was paralyzed in his hind legs by a similar dose hypodermically over the loins, but it recovered. Many other experiments might be adduced, but I will not trespass on your time. There is one other property possessed by this drug that is worthy of mention—it is a germicide and anti-ferment of no mean quality. In some clumsy experiments made by myself I have estimated its potency in this field as about one-half the strength of carbolic acid. It has long been used as a domestic remedy for the destruction of lice and other vermin.

For some years past I have had an intention of bringing before the profession reasons, rather feeble it must be admitted, for the supposition that the medicine under consideration has marked potency in a direction, so far as I know, not suspected by medical men. Up to this time the declaration on the part of standard writers that sassafras is a remedy of questionable power, and the fact that it is hawked about the streets and used freely as a tea all over the country, have caused me to refrain from bringing before a scientific body my limited experience presently to be detailed. But the recent declaration that this drug possesses toxic properties may justify me in making the following statement: Years ago I was called to a woman among the poorer classes, of good intelligence and education, who was having a miscarriage. Upon my inquiring as to the cause of the mishap, with a prefatory reference to her poverty and already large family, she stated that she had induced the abortion herself—that she had done so on previous occasions. She had employed, she said, "what other women used," sassafras tea. She was surprised that I did not know of the property of sassafras as an oxytoxic. She spoke as if all her friends knew how to use it as an ecbolic, and she evidently looked upon it as a specific. Tea, she said, made from four or five pieces of the root, as large as the thumb and twice as long, would produce abortive effect.

A year or two later I was called to a woman two months pregnant. For several days she had had symptoms of miscarriage of so pronounced a character that arrest of the process was doubtful. I found the patient very anxious to have a child; she disclaimed the intention of inducing abortion, and to all my inquiries as to a possible cause of the hæmorrhage, she gave answers which left me no further question except this: "Have you been drinking sassafras tea?" Surprised, she replied that for a week past she had used it at breakfast and supper. The proper remedies for her condition were prescribed, the possibly offending tea left off, and in twenty-four hours all was quiet *in utero*.

Farther than this my experience with sassafras as a possible abortifacient does not extend; possibly some one present can supplement my remarks with knowledge or experience of his own. A study of the toxic effects of sassafras as reported by Dr. Hill, and here suggested, would seem to show a triple resemblance to three familiar articles, opium, strychnine

and ergot. In its action as a narcotic and sudorific it resembles opium. In its property of inducing tetanic and clonic spasms, followed by paralysis, it is similar to strychnine. In its power hinted at of exciting the uterus, it may be linked to ergot. It may be of interest here to call attention to the fact that the first reference to the use of ergot as an ecbolic was made by Stearns in 1807, whereas it had been used by midwives certainly as early as 1688, and probably very much earlier.

DR. JAMES H. ETHERIDGE, referred to the action of the oil of sassafras on the motor centres in the spinal cord, supplying the uterus.

DR. EDWARD WARREN SAWYER said in New England sassafras was a popular emmenagogue. Mothers were in the habit of giving decoctions of sassafras and tansy to their daughters in case of delayed or suppressed menstruation. Many of the essential oils produced the effects ascribed to sassafras by Dr. Bartlett. In the South, oil of sassafras was a popular remedy for uterine disease.

THE PRESIDENT inquired as to the chemical constitution of the volatile oils?

DR. H. P. MERRIMAN replied that many of the volatile oils were identical in chemical relations, but differed in physical properties. Such oils were *isomerides*. The essential oil of lemons, of bergamot, neroli, lavender, pepper, camomile, caraway, clover, etc., are isomerides of the oil of turpentine.

Oil of sassafras was an isomeride; whether or no of the turpentine group, he could not say. Oil of turpentine was a hydrocarbon, possessing the formula $C_{10}H_{16}$.

DR. H. T. BYFORD was of the opinion that the oil of sassafras exerted its influence locally upon the alimentary canal and pelvic viscera, through which it was excreted, rather than upon the uterine nervous centres, as in the case of ergot. This would account for its popularity as an emmenagogue, mentioned by Dr. Sawyer. He had recently given one drop, combined with one-half grain of piperin, every three hours, for two weeks, in case of typhoid diarrhœa. Slight strangury, disappearing with the discontinuance of the drugs, was produced.

(*To be concluded.*)

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

[FROM OUR OWN CORRESPONDENT.]

Mortality from Zymotic Diseases in England—Overcrowding among Workmen—Nitrite of Amyl in Opium Poisoning—An Attack on Pasteur—A New Lead Battery.

During the past ten years in England, there appears, from the decennial report just issued by Dr. William Ogle, of the statistical department of the General Registry Office, to have been a most satisfactory falling off of the mortality due to the various zymotic diseases, with the exception that whooping-cough has remained stationary, and that from small-pox a large increase of from 163 per million living to 236 per million. This increase is due to the very serious outbreak which marked the two first years of the decennium, 1871 and 1872, and which led to the appointment of compulsory vaccination officers by boards of guardians, and consequently to a more stringent enforcement of infant vaccination. If, however, the statistics of small-pox are given by what Dr. Ogle calls natural periods, that is, by periods which coincide with successive improvements in the enforcement of the vaccination acts, it becomes manifest that there has been a gradual and notable decline in the mortality from the disease. It may be further shown that this decline is due to diminished mortality amongst children of tender age, while the mortality at later periods of life has actually increased, and has increased in proportion to the age attained. The explanation seems to be that when regarded by the light of long experience, vaccination confers an immunity from small-pox which is as real as, but less permanent than, that conferred by small-pox itself; so that the protective influence of the former requires to be renewed from time to time. This precisely coincides with the results which have been recently set forth by the German Commission appointed to inquire into the subject.

Taking the other principal zymotic diseases, it pears that the annual deaths per million living, from scarlet fever, have fallen from 972 to 716; those from fever, including typhus, enteric and ill-defined forms of continued fever, from 885 to 484; those from diarrhœa, from 1076 to 935; those from phthisis, from 2475 to 2116; and those from diphtheria, from 185 to 121. Under the two last headings, however, there is some uncertainty as to how far the improvement may be only apparent and due to more exact statement of the causes of death upon the medical certificates. Diphtheria is probably less liable than formerly to be confounded with other forms of fatal croupous affections; and phthisis is less liable to be confounded with other forms of diseases of the respiratory organs, under which latter heading the fatality has increased. The report contains much valuable information with regard to the mortality produced by many other diseases. It may be mentioned that the deaths of women in childbirth have remained practically stationary for the last thirty years, and that they amount to something less than five for every thousand children born living.

The total death-rate during the ten years, 1871 to 1880, is 21.27 per thousand, varying in different localities from 14.13 and 33.57 per thousand. Among the 647 districts into which England and Wales are divided, there were eight in which the mean annual rate was under 15 per 1000, 31 more in which it was under 16, and again, 62 others in which it did not exceed 17. These 101 districts are described as the "selected healthy districts," and form a useful standard for comparison. In 326 other districts, the mean annual death rate was between 17 and 20, in 190 it was from 20 to 25; in 23 from 25 to 30, and in the remaining two it exceeded this high figure. Dr. Ogle attributed these differences partly to difference in the quality of the sanitary administration, partly to the

different density of population, and partly to unwholesome occupations.

Mr. Middlewick, in a paper read before the Association of Public Sanitary Inspectors, took up among other points, the subject of overcrowding as the result of a necessity for the workman to live near his work, and urged the remedy which has been so much discussed, of the extension of living ground out of London by the installation of a regular system of workmen's trains. Previous evidence in regard to this point shows that it is very doubtful whether this system would be accepted by the mass of artisans, or whether it could be made to pay. Mr. Middlewick also attacked the "model dwelling" system, on the ground that the rents were too high in such buildings and that there was very little recreation ground in connection with them in comparison with the number of children who lived in them. The latter statement is certainly true, but it is connected with the former inextricably. The aim of most people who promote model dwellings is to make them remunerative at as low rents as possible. If more ground is taken, rents would be proportionately higher, unless the buildings are to become a mere charity establishment for finding people homes at rents convenient to their means.

The following case, in which nitrite of amyl was used as an antidote to opium, will doubtless be considered sufficiently important to lead others to try the same treatment in desperate cases of opium poisoning. The case recorded is of a person who took two ounces of laudanum, and showed every symptom of opium poisoning—coma, small pulse, feeble and infrequent respiration (six to the minute), coldness and cyanosis. Belladonna proved useless, while inhalation of nitrite of amyl immediately improved and ultimately restored the patient.

M. Henry Rochefort is never happy for a long time, if some one, or some thing, is not attacked in his organ. This paper has made itself remarkable by the acerbity with which it has attacked M. Pasteur, whose equanimity, however, is not disturbed. A week or so ago it printed a sensational paragraph concerning a tragic incident which it affirmed had just occurred in Paris. A child six years of age who had been bitten by a mad dog was placed by her parents under M. Pasteur's care; and, as the paper asserted, had lost her life in consequence of his treatment. As a matter of course, the absolute correctness of the story was vouched for, defying M. Pasteur to contradict it. It turns out, however, that it omitted to state the real truth, which very materially alters the circumstances of the case related. The little girl placed under M. Pasteur's care met with the accident which proved fatal six weeks before he was consulted. The dreaded malady—hydrophobia—had consequently time to develop itself; and the case, evidently, cannot be accepted as furnishing a proof against the value of the distinguished savant's theories.

A new medical battery has come out, in which the authors use lead in place of zinc, as the positive element, which is easily reducible from most of its compounds. As the negative element, they employ a conductor, preferably of lead or carbon, coated or kept in contact with a layer of peroxide of lead.

The honor of knighthood has been conferred on Dr. James Sawyer, the well known physician of Birmingham. G. O. M.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

[FROM OUR OWN CORRESPONDENT.]

The Indications for Laparotomy in Penetrating Stab and Shot Wounds of the Abdomen—Vaginal and Vulvar Enterocele.

The last meeting of the Surgical Section of the Academy of Medicine, held December 14, was one of unusual interest. The subject for discussion was, *The Indications for Laparotomy in Penetrating Stab and Shot Wounds of the Abdomen*, and several prominent surgeons and gynecologists took part in the debate. It was opened by Dr. Joseph D. Bryant, who went over the ground more carefully and systematically than any of the other speakers. Taking for his text the dictum: "Laparotomy should be performed in all cases and immediately after the accident," he said that he who unconditionally asserts that any operation or method of procedure should be performed in all cases, even though it be a measure accepted by the profession generally, takes a position which requires, in justice to the profession and the patient, that all operators should be competent and well equipped for its performance. Especially was conservatism necessary in the advocacy of an operation the propriety of which, as yet, is spoken of by many with doubt commingled with dread. Few indeed were the hospitals in the city of New York which could "immediately after the accident" offer the recognized facilities necessary to dispatch and cleanliness in operating; not to mention other circumstances bearing on the success of the procedure. How much less properly prepared for the performance of laparotomy would the unfortunate patient find the general mass of the profession?

He thought it well to divide the dictum referred to into three interrogatories, and the first was, *Should laparotomy be performed in any case?* It could not be denied that laparotomy in connection with various abdominal growths was a fully established operation, and there was no proof, so far as he knew, that the peritoneum of the male was not as tolerant of manipulations as that of the female. Again, the success of Billroth and many others in operations upon the stomach, pylorus, kidneys, etc., fully showed that intolerance of the peritoneum could not be considered as a rational objection to laparotomy; while these operations showed also that neither could the length of time required nor the great extent of raw surfaces resulting in many instances be urged as objections.

Among the practical elements which at the present enter into a case of laparotomy for penetrating wounds, but which do not exist, or at all events exert an equal force, in laparotomy for other common causes, he mentioned the following: (1) *A doubt*

whether the abdominal viscera were injured. Although this doubt, at best, could exert but little influence, it could at once be set at rest by an exploratory incision. (2) *Existing shock.* He believed it to be an established fact that when severe shock follows immediately after the injury it is due, in the great majority of instances, to loss of blood; and if this were the case, the indication was to check the hæmorrhage at once. An exploratory incision would decide this question also. (3) *Unfavorable surroundings of the patient.* It was impossible to avoid such circumstances entirely; but their dangers could be greatly lessened by caution in moving the patient, by taking at once to a suitable hospital, instead of his own home, and by increased familiarity on the part of the profession with all the details pertaining to the proper performance of laparotomy. (4) *Unskilled operators.* This element could be altogether overcome if the members of the profession would only devote a reasonable amount of attention to this important subject. (5) *Greater exposure of the abdominal cavity and its contents.* (6) *Existence of hæmorrhage.* The vessels of the omentum and of the intestines, especially the former, bled with unusual pertinacity, and the suspicion of the existence of much intra-abdominal hæmorrhage was enough to indicate the making at least of an exploratory incision. (7) *Extravasation of intestinal contents.* This was the strongest of all the indications for laparotomy, which offered, indeed, the only chance of recovery; and here again, when such a condition was simply suspected, the exploratory incision was called for to determine the question. (8) *The greater difficulty of cleansing the abdominal cavity.* If blood and intestinal contents had been generally diffused, the cleansing of the abdominal cavity was more tedious and difficult, and also of greater importance, than in laparotomy for other causes; but the thorough performance of this duty, at least so far as the intestinal contents were concerned, appeared to be the only means of saving the patient's life. As to blood, no one could tell the amount that might remain, and yet recovery take place. In Dr. Bryant's opinion, laparotomy was a justifiable operation in penetrating abdominal wounds; but it was not to be attempted, even in so-called favorable cases, unless the operator could avail himself of many of the recognized means of procedure and was sufficiently familiar with its steps to do the work with accuracy and dispatch.

Leaving the second interrogatory, *Should laparotomy be performed in all cases?* to be discussed by others, he passed on to the third, *When contemplated, should it be done immediately after the accident?* Assuming all things to be equal, he thought that it should be done at once, or at least as soon as the necessary preparations could be made. In most cases there should first be an exploratory incision, and then this should be followed, if the condition of affairs warranted it, by the actual laparotomy. In the former the incision was made in the median line, so situated and of sufficient length to expose to view the probable seat of the internal injury. The surgeon could then, in the great majority of instances, determine if penetration of a viscus had taken place, and if hæmorrhage or intestinal extravasation existed. If the patient were in danger from immediate hæmorrhage, the blood could be seen in the abdominal cavity through the opening. In conclusion, Dr. Bryant asked, *Does the exploratory incision expose the patient to unusual dangers?* The large number of successful laparotomies both in this country and abroad seemed to him to answer this question in the negative, and if this were true, he said, all that was possible was gained; while but little could be lost from the exploratory incision.

Dr. J. Williston Wright said he was not prepared to take the ground that all cases of penetrating wounds of the abdomen were to be treated by laparotomy. As regards gunshot wounds, it would be found that the large or small size of the missile, as well as the velocity of the latter, made a great difference in the severity of the injury. Dr. Wright facetiously expressed his contempt for the ordinary 22-calibre revolver bullet by saying, that if any one were to shoot him with one of these balls he should feel it his duty to go across the street and kick the individual firing the shot. As a rule, such a bullet lodged in the abdominal walls; but even if it did penetrate the cavity and pass through a knuckle of intestine, the opening made by it was so small that an eversion of the mucous membrane was caused, which would be sufficient to prevent the extravasation of fecal matter, while the hæmorrhage would be but trifling. But if, on the other hand, he were called to a case in which the injury had been inflicted by what is known as an "express charge"—a 40-calibre bullet weighing 270 grains, with 110 grains of powder behind it—he would expect to find abundant indications for the performance of laparotomy; and even in the absence of symptoms, he would consider the case one for immediate operation, because he would feel very sure that if such a missile got into the abdominal cavity at all, it would cut and tear everything that came in its way.

In stab wounds he said he would not perform laparotomy in many cases, even if he knew that the wound were a penetrating wound, or even if the omentum were protruding. In this connection he mentioned the case of an intoxicated sailor who stabbed himself in the abdomen, and when a portion of the omentum protruded through the wound, caught hold of it in his drunken folly and dragged it still further out. Yet the man recovered perfectly, and that without being laid up for an hour. He also mentioned a somewhat similar case at Bellevue, that of Carpenter, the murderer, who stabbed himself in the abdomen.

Dr. R. F. Weir said that in penetrating wounds, unless there were symptoms indicating injury of the intestines or abdominal viscera, he did not think it was advisable to interfere. With gunshot wounds, however, the case was different, and he did not hesitate to acknowledge that he had more respect for the small bullet than Dr. Wright. As a rule, one of the indications was to explore the wound under any circumstances, and he thought that statistics clearly proved that every gunshot wound of the abdomen at short range should be carefully examined in order to see whether it penetrated the cavity. If there was

shock which did not proceed from hæmorrhage, it was best to defer laparotomy until this had passed; but he agreed with Dr. Bryant that it was best to make a small exploratory incision in every case where it was impossible to decide whether the shock was due to hæmorrhage or not.

Dr. W. M. Polk said that the exploratory incision, as practised in gynecological surgery, was a very simple affair, less free from danger than the opening of the pleural cavity; but he doubted whether such a very simple incision as those who confined their attention to this department frequently had to make would be sufficient in the class of cases now under discussion. If it was necessary to introduce the hand and feel around among the intestines, a great deal was added to the risk; and the more the intestines had to be handled, the greater the danger would be.

Dr. W. Gill Wylie said that he would have no hesitation in opening the peritoneum in any case where the patient's life was in question. There was very little danger of increasing shock thereby, and if the shock was due to hæmorrhage, which was very likely to be the case, the prompt performance of laparotomy was urgently demanded for the purpose of checking this. One of the principal dangers was from septic infection, and after performing operations in the abdominal cavity he not infrequently washed out the latter with a solution of bichloride of mercury, 1 to 10,000, following this with the injection of simple hot water.

At a general meeting of the Academy held December 17, Dr. T. Gaillard Thomas read a paper on *Vaginal and Vulvar Enterocele*. It was curious, he said, to note how very generally these varieties of hernia have been ignored in the systematic treatises; and this was the more remarkable since errors in their diagnosis were very liable to occur. Of *vaginal enterocele* he said that it consisted in a descent of the intestines into the pelvic cavity, either in front of or posterior to the broad ligament; this descent always taking place obliquely. A tumor finally formed in the vaginal canal, inverted one wall of that canal more and more completely, and might end by escaping from the vulva and hanging outside the body, as a complete prolapse of the bladder or rectum would do. Under these circumstances it was evident that the tumor which protruded had for its component parts (1) the inverted vaginal wall, (2) the peritoneum, and (3) the intestines. Later on in the paper Dr. Thomas related a very remarkable case which had lately come under his notice, in which such a vaginal hernia hung down to the middle of the thigh, and in which, on account of the extreme sufferings of the patient, which had lasted for a number of years, he was induced to perform laparotomy. When the abdominal walls had been cut through, an assistant in the meanwhile pressing the tumor up in the pelvis, he found, on a line with the symphysis pubis, a large soft tumor, which had probably been the original source of the trouble. This he removed, securing the sac in the abdominal wound with sutures, and the patient made a good recovery. Five weeks had now elapsed, and there had been no return of the symptoms which had formerly rendered the patient's life miserable; though he said that he still felt somewhat apprehensive of the future. The tumor removed was examined by Dr. H. C. Coe, the pathologist to the Woman's Hospital, and he expressed the opinion that it was probably an unusual growth of the pelvic connective tissue.

Unquestionably the greatest danger attending vaginal, as well as pudendal and perineal hernia, arose from the possibility of an error of diagnosis on the part of an impulsive or unwary surgeon. Vaginal hernia, as long as it remained in the pelvic cavity, and did not interfere with parturition, was usually a matter of little moment. Under certain malign influences, however, occurring during labor, as well as in the non-parturient state, such as pressure from the fœtal head, inflammatory processes, fæcal impaction, torsion of the contents of the sac, or the existence of a neoplasm, strangulation might occur. The symptoms which were then apt to develop were: Difficulty in locomotion, pelvic tenesmus, dragging sensations, tendency to constipation, and, in time, vomiting. Should the accident complicate parturition, obstructed labor was apt to result. Upon vaginal examination a tumor of greater or less size was found in the vagina, and was diagnosticated by the following physical signs: It is supple, soft and yielding; decreases upon pressure; gives a sense of gurgling to the finger, if not to the ear; increases upon the patient's coughing or straining; yields resonance upon percussion; and is very generally reducible if the patient is placed in the knee-chest position and efficient taxis is practiced. Error in diagnosis was likely to occur, Dr. Thomas said, from the practitioner's being too confident, too much off his guard, and too little inclined to consider the possibility of a mistake. If he approached these cases calmly, philosophically, and in a proper spirit of diagnostic investigation, it was very improbable that the nature of the trouble would be misunderstood. In certain rare instances acute vaginal hernia occurred as a consequence of some traumatic influence destroying the continuity of this canal in its upper part, and he related two such cases which had come under his own observation.

Pudendal hernia demonstrated its existence by the presence of an elastic tumor about the middle of the labium majus of one side. Having explained its mode of origin, he said that from inguinal hernia ending by descent into one of the labia majura the internal variety might thus be distinguished: (1). The finger, pushing the tumor upward, will pass into the pelvic cavity between the ischium and vagina. (2). At the level of the os uteri, or thereabouts, it will enter the pelvic roof. (3). Pressure being maintained on the inguinal canal, and the patient being ordered to cough, it will, in spite of the pressure, recur. The following conditions are mentioned as liable to be confounded with pudendal hernia: Cyst or abscess of the vulvo-vaginal gland; abscess of labium majus; fatty or fibrous tumors of the labium; tumors descending from the pelvic cavity. The differentiation of pudendal hernia from these conditions of the labia should be very carefully considered; for if an erroneous diagnosis were made here, a fatal issue

would probably be the result. The diagnostic signs which proved most reliable, and which might almost be styled pathognomonic, were these: (1). Airy feeling upon palpation; (2), gurgling upon replacement; (3), diminished tension in the dorsal decubitus; (4), diminution of bulk upon taxis; (5), resonance upon percussion; (6), succussion upon coughing; (7), intestinal pains of colicky character.

Dr. Thomas then went on to speak of perineal hernia. This might affect both male and female, and in the latter it consisted of the descent of the intestines between the vagina and rectum, the advance being made posterior to the broad ligament, and continuing until the perineal muscles are forced apart, and the gut, with its peritoneal envelope, was arrested by the skin. All these varieties of hernia were usually readily amenable to taxis, and this he had invariably found to be greatly facilitated by the knee-chest position. In some rare cases strangulation occurred; and under these circumstances the same surgical practice was indicated as in inguinal or crural hernia, viz., cautious opening of the sac, and section of the constricting band by passing up a probe-pointed bistoury.

In conclusion, he remarked that, unfortunately, little could be said concerning the treatment of vaginal or vulvar hernia, for the reason that there was but one variety, the pudendal, for which very much could be done. That variety was amenable to treatment by the ordinary truss, as inguinal hernia was. The other varieties could to a limited degree be relieved by pessaries, perineal pads, abdominal bandages, etc.; but we were poor in methods of decided relief, and utterly wanting in those of cure. It appeared to him that the plan suggested and partially carried out in the case of vaginal hernia which he had related promised more than any other which had been brought forward; but of the validity of this promise time and experience would have to give the proof. He was certain that if another case of large vaginal hernia should present itself he should feel inclined to try laparotomy; dragging up the sac, and fastening it in the abdominal wound. P. B. P.

THE INTERNATIONAL CONGRESS.

TO THE EDITOR OF THE JOURNAL:

Dear Sir.—According to the *Medical News* (of Philadelphia) of December 26, "*The Medical Record* gives the following editorial note from the *St. Petersburg med. Wochenschrift*, of Nov. 21: 'The prospects of the next International Medical Congress, which *was* to meet in 1887, in Washington, have lately, in an unusual manner, been put in jeopardy. The original Organizing Committee, of which, as announced by us in previous communications, *the well-known Surgeon-General of the U. S. Army was Secretary-General*, and to which the most distinguished American physicians belonged, has been retired. This was accomplished through the intrigues and hostility which developed at the last annual meeting in New Orleans. At this time a new Committee was appointed, *under the Presidency of a Dr. Shoemaker*, of Philadelphia. This new organization committee contains but a few of the members of the previous committee, and *is composed mostly of unknown and insignificant physicians*, who inspire no confidence in their capacity for conducting the Congress.'"

When the *St. Petersburg med. Wochenschrift* knows no better than to confound "*the well-known Surgeon-General of the Army*" with the officer who was the Secretary-General of the committee of seven, it publishes the value of its condemnation of the new committee as "composed mostly of unknown and insignificant physicians." To it they doubtless are unknown. But what shall be said of both the *Medical Record* and *Medical News*, which reproduce this statement about "the well-known Surgeon-General of the Army" (and not for the first time) without contradiction? SURGEON.

MISCELLANEOUS.

THE PHILADELPHIA POLYCLINIC.—The new building for the Philadelphia Polyclinic College on Broad Street will soon be ready for its occupants. The building will contain more hospital wards and private rooms for pay patients, and the dispensary service will be given more attention.

POISON IN GEORGIA.—A new law in Georgia enjoins that poison must be put up in scarlet wrappers and the bottles labeled with paper of the same color, the printing to be in white letters. "Of all the hard papers to find in market," says a wholesale druggist, "scarlet is the most difficult, and printers say they cannot print in white upon such a surface. The lawmakers have hit upon an extremely difficult problem for the druggists."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM DECEMBER 26, 1885, TO DECEMBER 31, 1885.

First Lieut. Thos. J. C. Maddox, Asst. Surgeon, killed Dec. 19, 1885, in affair with Apache Indians, near the White House, New Mexico.

Asst. Surgeon F. J. Ives, ordered to report to commanding officer District of New Mexico for duty in the field. (S. O. 127, Dept. Platte, Dec. 23, 1885.)

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDED JANUARY 2, 1886.

Purviance, George, Surgeon, to proceed to Chicago, Illinois, as inspector. Dec. 23, 1885.

Guitéras, John, Passed Asst. Surgeon, to proceed to St. Louis, Missouri, for duty. Dec. 23, 1885. Granted leave of absence for seven days. Dec. 26, 1885.

Urquhart, F. M., Passed Asst. Surgeon, to proceed to Charleston, South Carolina, for temporary duty. Dec. 23, 1885.

Bratton, W. D., Asst. Surgeon, granted leave of absence for twenty-two days. Dec. 22, 1885.

McIntosh, W. P., Asst. Surgeon, granted leave of absence for fourteen days. Dec. 22, 1885.

Guitéras, John, Passed Asst. Surgeon, upon expiration of leave of absence, to re-assume charge of the Service at Charleston, S. C. Dec. 29, 1885.

Fattic, J. B., Asst. Surgeon, appointed an Assistant Surgeon, Dec. 28, 1885. Assigned to duty at Baltimore, Md., Dec. 29, 1885.